

SD Times

SOFTWARE DEVELOPMENT

The Industry Newspaper for Software Development Managers

FEBRUARY 1, 2004

ISSUE NO. 095

Microsoft Tackles
Linux Issues Head-On5

New Specification Ties
Web Services to Events5

WebMethods Directly
Executes .NET Assemblies ...5

RoboHelp Debuts
Under New Owner6

Macromedia Wraps
Director MX 20046

Linux Vendors Move
To Protect Customers8

Catalyst Aims to Make
Java Builds a Picnic
By Embedding ANT Tool9

SOAPscope 3.0
Supports WS-I's
Basic Profile10

WebSphere 6 Uses
Features of J2EE 1.410

Conference Takes Web
Services Over the Edge ...12

Transmeta Shrinks
Crusoe, Grows
Embedded SDK19

Macromedia Goes Mad
Over Mobile Media19

I-Logix Claims to Automate
Model-to-Physical
Mapping19

SPECIAL REPORT



Building on .NET21

A BZ MEDIA PUBLICATION \$7.95

www.sdtimes.com

ECLIPSE INCORPORATES CHANGES INTO FRAMEWORK

With independence comes effort to lure more developers with ease of use

BY JENNIFER DEJONG

On the eve of its first technical conference—EclipseCon—to be held in Anaheim, Calif., this week, the Eclipse consortium offered a glimpse of the next version of the open-source application framework that focuses on broadening its use.

Following through on its planned separation from IBM Corp., it also said it will officially incorporate under the name The Eclipse Foundation.

Version 3 of Eclipse, under development for six months, will be available in June, said John Wiegand, platform lead for

Eclipse and a member of IBM's technical staff. He categorized enhancements to the framework according to three themes: user experience, responsive user interface (UI) and rich-client platform.

Improvements to the user experience include making the framework more scalable for plug-ins. "While 50 to 100 plug-ins will work well, when you add hundreds [to the current version of Eclipse], there are problems," noted Wiegand. "For example, you could end up with 100 items on a single

► continued on page 15

The Rush to SOA

Vendors move to service orientation, but is the enterprise being served?

BY EDWARD J. CORREIA

Service-oriented architectures are on the minds and in the presentations of many vendors these days. As scrambling hardware and software vendors add to, modify or acquire technology to SOA-enable their offerings, varied solutions are emerging to help the enterprise arrive at what one analyst said is the same end.

The goal is to "deliver a service that's transparent to the user, and at the point in time when they need that service, it's

not determined by or linked to the underlying infrastructure," said Mark Shainman, an analyst with research firm Meta Group Inc. "Sun has traditionally been more of a hardware-operating-system-centric entity, so that's where their stack begins. Oracle has been a database-centric organization, so the centerpiece of their services offering is 10g." But the end result should be the same, he said.

Among the most recent SOA releases is Fabric, WebMethods Inc.'s Web services framework released in January and inherited with its purchase last October of The Mind Electric. Formerly known as GAIA, the software combines screen scraping, protocol interception and other methods to abstract underlying hardware and applications, turn-

Java Tools Community Controversy

Top vendors Borland, IBM take a pass on common 'toolability' effort

BY YVONNE L. LEE

Sun Microsystems Inc. and nine other Java tools vendors in early January formed the Java Tools Community (JTC) to make it easier to create tools for upcoming Java specifications, but the lack of a clear road map left two key Java toolmakers waiting in the wings.

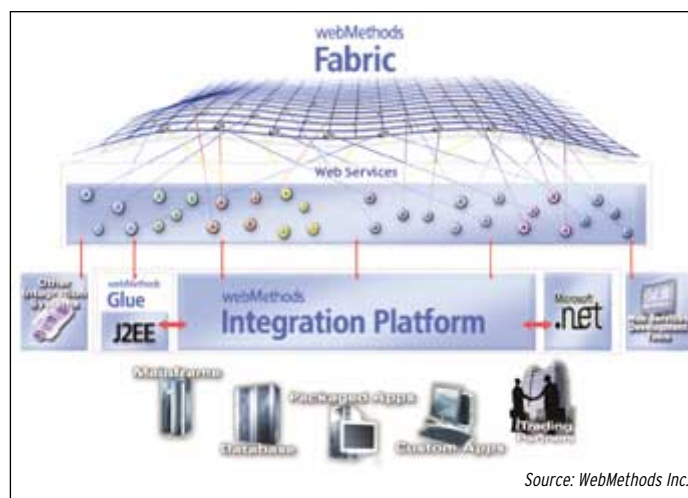
Founding software vendors are BEA Systems Inc., Compuware Corp., Embarcadero Technologies Inc., Iopsis Software, JetBrains Inc., Oracle Corp., Quest Software Inc., SAP AG, SAS Institute Inc. and Sun. Founding customers include Sprint Communications Co. and Verizon Communications. Absent from the new Java Tools Community are Borland Software Corp. and IBM Corp. Sun officials said they approached both companies about joining the JTC.

The group has coined the term "toolability" as its goal. The JTC defines toolability as a measurement of how easy it is to build tools around a particular standard or technology. The group claims that developers will be able to use Java technology more easily to build applications, and that this in turn will increase the rate of Java adoption.

"The only way to work with [the Java Community Process today] is to be a member. What you really want is not just the tool vendors to be involved, but their customers, too," said Ken Oestreich, Sun's Java and software strategy manager.

To that end, the group will consist of both tools vendors and their customers. According to Oestreich, the group seeks to unite three constituencies:

► continued on page 14



Source: WebMethods Inc.

WebMethods' Fabric offers a software-only SOA solution.

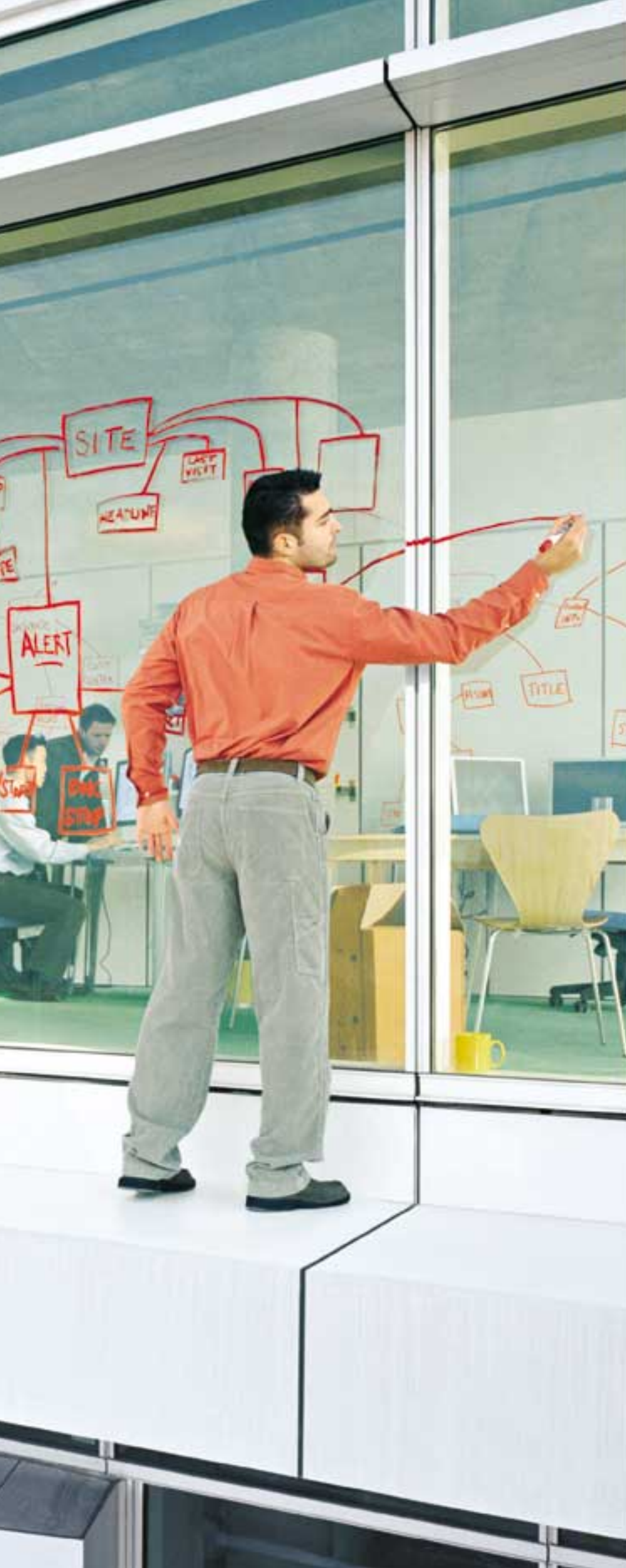
ing everything into Web services.

Jim Ivers, the company's vice president of product marketing, said that while most major vendors have SOA on their road map, they are still struggling to know what it means. "Most products were not built to be service-oriented by nature, and companies are struggling either to rearchitect their software or to come out with new versions."

An integral part of the WebMethods solution is its Integration Platform, which Ivers claimed was designed with services in mind. "Whether we were geniuses or just lucky, when we first architected our product in 1996, every integration we built was a service. When Web services emerged as a standard, it was simple for us to wrap our services with WSDL and

► continued on page 13

Microsoft
Your potential. Our passion.™



**Think way,
way outside the box.**

By cutting up to 80% off your development time, Visual Studio .NET 2003 gives you more time to do what you do best. Think.

Got a big idea? Visual Studio® .NET 2003 delivers a higher level of productivity, so you can turn that big idea into reality faster than you ever thought possible. Want proof? Merck & Co. Inc. was able to create a solution that accelerated and improved the accuracy of their monitoring process in a time frame barely imaginable before they began using Visual Studio .NET 2003. To read the full story on how Merck and other companies are using Visual Studio .NET 2003 to quickly turn their big ideas into reality, visit msdn.microsoft.com/visual/think

Microsoft
Visual Studio



Great execution of poor requirements
is still poor execution.

Borland® CaliberRM® enterprise requirements management. Hold all the stakeholders together and standardize requirements input, down to the last word. Analyze the impact of changing requirements before they hit. Ride herd on expectations in real time and fend off scope-creep. Powerful decision support helps you hit milestones with greater accuracy and predictability. So you can make sure your product suits the requirements, and you look good.

- Replaces ad hoc, imprecise requirements input
- Generates change alerts
- Spreadsheet views for sorting and prioritization
- Automated audit trail and change history
- Electronic signature capability
- Visualizes the impact of changing requirements in user-selected views
- TCP/IP-based; ideal for distributed teams
- No import/export integrations
- Integrates live into complementary technologies like the Borland Suite and other best-in-class products

go.borland.com/rm4

Made in Borland® Copyright © 2004 Borland Software Corporation. All rights reserved. All Borland brand and product names are trademarks or registered trademarks of Borland Software Corporation in the United States and other countries. • 21430

Borland®
Excellence Endures™

Microsoft Tackles Linux Issues Head-On

BY JENNIFER DEJONG

In an ongoing effort to compete with open-source Linux, Microsoft Corp. announced last month the availability of version 3.5 of Windows Services for Unix (SFU), which it says makes it easier for developers to recompile Unix and Linux applications to run on Windows.

The company last month also launched a Web site titled Get the Facts on Windows and Linux (www.microsoft.com/mscorp/facts). The site links to three separate studies, all of which conclude that Windows is a more cost-effective choice than Linux.

Unlike SFU 3.0, which shipped in May 2002, SFU 3.5 is available free of charge. "Eliminating the licensing fee for SFU 3.5 removes an impediment," said Dennis Oldroyd, a director in the Windows server group at Microsoft.

While the interoperability tool is aimed primarily at network administrators who use Windows to manage mixed environments that also include Linux and Unix servers, SFU 3.5 also offers enhancements for developers, said Oldroyd.

Version 3.5 extends the Interix subsystem, which enables Unix programs and scripts recompiled to run on Windows to support multi-threaded applications. It also offers broader support for POSIX calls, said Oldroyd.

The Interix technology was initially embedded in SFU 3.0.

"Extensibility is a key benefit for developers," said Oldroyd. "Most prefer not to rewrite existing applications."

FACT OR FUD

According to the Get the Facts Web site, a report from research firm IDC concludes that "lower staffing costs for Windows provide a total cost of ownership (TCO) advantage over Linux." Linking to the actual report, "Windows 2000 versus Linux in Enterprise Computing," reveals that the IDC white paper was sponsored by Microsoft and copyrighted in 2002.

Also featured on the site is a "Mainframe Linux Benchmark Project" under the headline: "WinTel Server 10 Times Less Expensive to Operate Than Linux Mainframe." The site makes clear that Microsoft sponsored the benchmarks. But the name Meta Group also appears below the headline. Linking to the report reveals that although the research firm verified the Ziff-Davis Media NetBench and WebBench benchmark tests Microsoft used, Microsoft, not Meta Group, carried out the study.

Continuing in the same vein,

the site refers to a third report, "The Total Economic Impact of Developing and Deploying Applications on Microsoft and J2EE/Linux Platforms," conducted by Giga Research, under the headline "Microsoft .NET Development Platform Delivers 25% Lower Development and Support Costs Than J2EE/Linux." The report was also sponsored by Microsoft.

A Microsoft spokesperson noted that company-sponsored research happens all the time. "Commissioning analyst reports and studies is a common industry practice to meet customer demand for indepen-

dent assessments of business scenarios. Microsoft has been clear about the research it has funded and transparent about the scope of the methodology," the spokesperson said.

Asked what he thought of Microsoft's Get the Facts Web site, Stuart Cohen, CEO of Open Source Development Labs (OSDL), a nonprofit organization that is committed to accelerating the use of Linux for enterprise computing, said: "I am thrilled to see it. It's another validation that Linux has gone mainstream. The acceleration of Linux is happening and it's happening rapidly." ■

New Specification Ties Web Services to Events

BY YVONNE L. LEE

BEA Systems Inc., Microsoft Corp. and TIBCO Software Inc. have teamed up on a software specification for Web services that publish and subscribe to one another.

With this specification, WS-Eventing, organizations could build Web services for shipment-tracking and credit-card processing programs that are triggered by real-time business events, such as when an item ships from a warehouse. Some other events are a phone ringing, an order being placed, a package shipping, a printer running out of paper, a favorite team scoring or a stock hitting a price point.

Currently, when organiza-

tions want to build Web services that react to events, they must either create their own method of communication to trigger interactions across disparate systems, or the reacting system must poll the system with the triggering event to see whether it has occurred.

WS-Eventing ties the Web service closely with the event that triggers it. The triggering event pushes a single message to the Web service instead of the Web service sending repeated polls to the software supporting the triggering event.

"To date, the Web services infrastructure has only been retrieving information from around the Internet," said Larry

Neumann, director of marketing strategies at TIBCO. "[Now] I can have a service that's a publisher of information instead of a consumer of information. If you subscribe to me, I'll tell you that it's happened. You turn everything upside down."

According to BEA technical director Dave Orchard, "The reality is that we have learned through decades of work [with other kinds of applications] that publish and subscribe is the right model from a performance and a dependency standpoint."

Because of its more instant performance, this model can be used for time-critical applications, said Neumann. For

example, a plane arriving late could result in the flight crew's working more than the mandated maximum number of hours, requiring members of that crew to be replaced. Related programs might have to assign staff to future flights, place passengers on different connecting flights, and provide accurate information to flight-status programs.

The three companies plan to submit the specification to a standards body such as OASIS or the W3C. That submission will happen only after the companies receive comments and opinions from other vendors and developers, said BEA's Orchard. ■

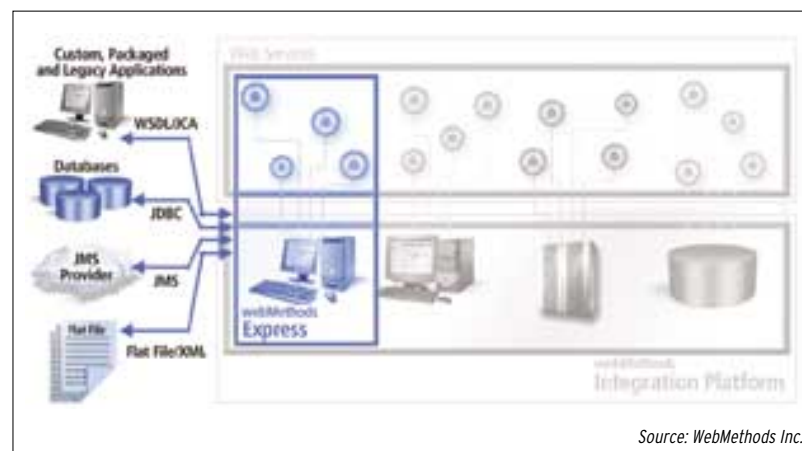
WEBMETHODS DIRECTLY EXECUTES .NET ASSEMBLIES

BY EDWARD J. CORREIA

Integration tools vendor WebMethods Inc. was set Jan. 30 to release an update to its flagship Integration Platform that it claims is able to execute .NET assemblies directly, simplifying the reuse of program code in integration projects for developers using Visual Studio .NET.

Microsoft defines an assembly as a .NET application's smallest unit of deployment, and one of the three .NET application components along with modules and types.

"There's an awful lot of business logic contained in .NET assemblies that you may want to reuse," said Jim Ivers, vice president of product marketing at WebMethods. He said assem-



Express is a scaled-down version of WebMethods' Integration Platform.

blies can be executed within the Integration Platform itself or exposed as Web services to WebMethods' Fabric integration framework, released in late

December. "This offers multiple ways of getting to the same intellectual property. And with a true service-oriented architecture, you don't want to have any

boundaries on where business logic can come from."

Ivers said developers exposing their assemblies to Fabric can leave them unchanged, and call on .NET as originally intended, "where you make the call and there's a predictable return of an answer." For developers that might need to modify code, he said, "catching the actual business logic is a more programmatic approach, and allows you to do more detailed work," such as building composite applications.

WebMethods says average installations of Integration Platform usually cost around US\$400,000.

EXPRESS TO POINTS

For companies looking to test the integration waters one project at a time, WebMethods in late December released Express, a scaled-down version of its Integration Platform designed to provide point-to-point integrations. Express can be combined with other WebMethods modules, including JMX+, its Java Message Service broker also released in December; and Mobile, components for extending enterprise back-end systems to mobile devices.

WebMethods Express typically costs around \$50,000 per integration, according to a company spokesperson. ■

News Briefs

COMPANIES

Trolltech AS has created **Qt Solutions Group**, a new division that will sell add-on components and tools for its Qt application framework. The group is launching with 11 components for SOAP messaging, MFC migration, Windows services and Linux daemons, SSL filtering, embedded X11 programming, advanced menu design and other functions . . . Digital signal processor maker **ParthusCeva Inc.** has renamed itself as **Ceva Inc.**, and has launched new lines of DSP cores and development tools. The company was formed in mid-2002 by a merger of Parthus Technologies Plc., DSP Group Inc. and Ceva Inc. . . . **Ascential Software Corp.** has created Ascential Developer Net, a developer Web site at developer.ascential.com . . . **ActiveBuddy Inc.**, which sells interactive agent software and solutions, has changed its name to **Conversagent Inc.**



CEO Stephen Klein said, "The company name that invoked the 'buddy' so familiar to the instant messaging community was not relevant to enterprises acquiring our technology for Web or wireless deployments. The name Conversagent serves all markets."

PRODUCTS

The beta version of **Engine/J**, from 842 Technology LLC, is designed to accelerate the networking performance of J2EE applications by optimizing the server's input/output interfaces. Engine/J uses the NIO—New I/O, JSR-51—APIs in the Java 2 SDK . . . IBM Corp. has a beta of the **WebSphere Micro Environment Toolkit** for palmOne's Treo 600 smartphone and Tungsten handhelds. The environment will work with IBM's WebSphere Studio Device Developer, Sun's Sun ONE Studio and Borland's JBuilder. The J2ME MIDP 2.0-based runtime, due out in the second quarter, will cost US\$5.99 per device . . . Computer Associates International Inc. has released **Unicenter Web Services Distributed Management**, which it calls the first complete solution for monitoring and managing Web services across and beyond the enterprise. WSDM is designed to work with both .NET and J2EE-based Web services . . . Serlio Software Development Corp., a Wisconsin-based consulting company, has released **HTML Control for IBM's Rational XDE** modeling software. The plug-in, offered at no charge, lets developers embed and view rich text and hyperlinks within XDE's UML diagrams . . . ActiveState, a division of Sophos Plc., is offering version 3.0 of its **Tcl Dev Kit**. The update includes a runtime profiler and code-dependency analyzer. It also has a cross-platform file system explorer. Tcl Dev Kit costs US\$295 . . . Flashline Inc. announced that



its **Flashline Registry** asset management system is now accessible as a Reusable Asset Specification repository. RAS is a metadata and file format from Object Management Group Inc. for managing software assets, originally promoted by Rational. Flashline also announced that its Flashline Repository is compatible with IBM's Rational XDE . . . Softel vdm Inc. updated its tab controls for C/C++. **SftTabs/DLL 4.5**, for Visual C++ and Microsoft Foundation Classes, offers 60 basic tab control styles, which can each be further customized. The new version, priced at US\$599, offers hidden tabs and supports generation of wizard-style and multipage dialog boxes . . . Handmark Inc. updated **MobileDB**, its embedded data list manager for Windows CE and Palm OS. Version 4.1 adds new support for downloading data lists through wireless connections, dialing voice calls and launching URLs into an embedded browser . . . Eiffel Software Inc. has updated **Envision**, its Eiffel language plug-in for Visual Studio .NET. Envision 2.0 includes a Windows Forms designer, and has new facilities for project references management and source control management. It also supports more features of VS.NET, including the inclusion of .NET resources, Visual Studio .NET Automation, compiler warnings and overloaded .NET methods . . . Research in Motion Ltd. is developing **BlackBerry Connect**, a software client that will allow Palm OS-based wireless devices to connect to its BlackBerry Enterprise Server or BlackBerry Web Client systems . . . **DataDirect Connect for JDBC**, a set of database drivers from



► continued on page 12

RoboHelp Debuts Under New Owner

Macromedia release adds edit tracking, PDF support

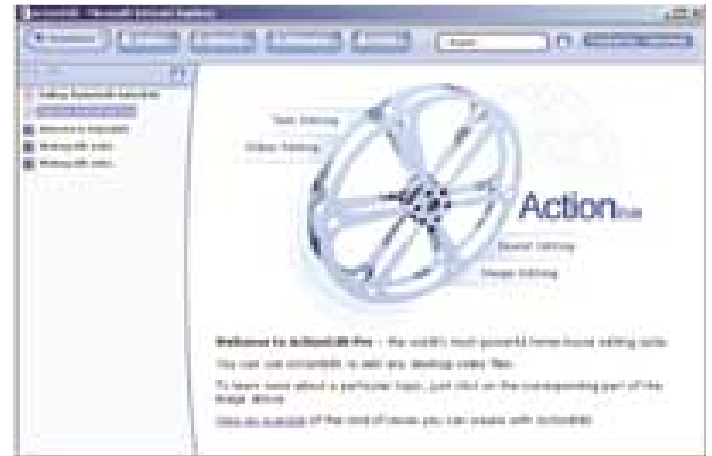
BY DAVID RUBINSTEIN

The first release of the help authoring tool RoboHelp since the company eHelp was acquired last year by Macromedia Inc. improves upon the FlashHelp format introduced in the previous release and adds complete edit tracking and the ability to create Portable Document Format (PDF) files directly from the tool, among other new features, according to the company.

With RoboHelp X5, made generally available Jan. 20, Macromedia is providing skins with FlashHelp to help companies match their corporate branding to the help system, according to Miriam Geller, Macromedia's director of product management.

The added ability to better handle XML imports and exports allows companies to reuse whatever existing XML is already in their help system, as well as to ship out pieces of the help system for use in a training document, Geller said as an example.

"The whole idea is about speeding the development of the help system," Geller said of the help authoring tool that



Macromedia demonstrates features of its RoboHelp X5 authoring system using the fictitious company name ActionEdit.

she claimed has two-thirds of the help authoring market. "You can import your content—a Word document, PDF, HTML—and RoboHelp splits it into help topics and automatically generates an index."

Once edits are made to the content, a user just chooses an output format, and the tool takes care of the technical details of how the content gets placed into the finished help system, she said.

Among the other new features are the ability to compare

versions and roll back to earlier iterations of specific files within the help system; version labeling; a check-in/check-out system for multiple users to share the system and to provide access control; and the ability to work with any source-control system that uses the standard APIs, Geller said.

RoboHelp X5 also can import PDF content and make it fully editable and searchable, as well as output to the PDF format, she added. The cost is US\$899 per user. ■

MACROMEDIA WRAPS DIRECTOR MX 2004

Updated multimedia development environment speaks JavaScript

BY DAVID RUBINSTEIN

Macromedia Inc. last month released Director MX 2004, an upgrade to its multimedia authoring tool, with new support for JavaScript and tighter integration with Flash.

Although new support for the DVD-Video media type fits into the needs of game and other multimedia application developers, enterprise developers might use Director to create training materials, according to product manager Miriam Geller.

"People who use Director tend to be people doing learning applications," she said, even while emphasizing that the uses are much broader. As examples, she cited RCA's use of the Macromedia tool to put an interactive application on a CD from "American Idol" winner Kelly Clarkson, and the U.S. Air Force Research Lab's being awarded millions in military projects based partly on its high-performance kiosk display

at military trade shows.

The ability to embed, control and play back DVD-Video files in multimedia applications makes Director MX 2004 "a good companion" for Adobe Encore and Sonic Solutions' DVD creation tools, Geller said. "You can bring DVD into Director and add further media types," she said, explaining that the disks are meant for use in computers and not television set-top boxes.

Until this release, developers working in Director had to learn Lingo, Macromedia's proprietary, object-oriented scripting language. Now, any developer with knowledge of JavaScript syntax can create multimedia applications, according to Geller. Also, the ability to publish applications to both Macintosh and Windows from either operating system has been added, she said.

Two other significant improvements involve integration with Flash, and the ability to

name Director assets, called "sprites," regardless of where they fall on the time line, Geller added. The Flash integration now includes the inclusion of numerous Flash components, such as buttons, lists, scroll bars and calendaring, within Director. Performance improvements to both Flash and Director will let Flash files imported into Director run better, she said.

Prior to this release, all assets appearing on the time line were automatically named by Director, Geller said. This made updating confusing, because if an asset were added between two existing assets, the naming of the existing asset would be changed. Now, the addition can be called whatever the developer wants, she said.

Pricing remains at US\$1,100 for the full version, \$499 for use by educational institutions, and \$399 for upgrades to current users, Geller said. ■

Relational
database

Object-oriented
development



A BETTER DATABASE CAN SPEED UP YOUR DEVELOPMENT CYCLE

If your back-end database isn't a good match for your front-end development, you need a new database.

Caché is the *post-relational* database that combines high-performance SQL for faster queries and an advanced object database for rapidly storing and accessing objects. With Caché, no mapping is required between object and relational views of data. That means huge savings in both development and processing time.

Applications built on Caché are massively scalable and lightning-fast. Plus, they require minimal or no database administration.

More than just a database system, Caché incorporates a powerful Web application development environment

that dramatically reduces the time to build and modify applications.

The reliability of Caché is proven every day in "life-or-death" applications at thousands of the world's largest hospitals. Caché is so reliable, it's the leading database in healthcare – and it powers enterprise applications in financial services, government and many other sectors.

We are InterSystems, a specialist in data management technology for twenty-five years. We provide 24x7 support to four million users in 88 countries. Caché is available for Windows, OpenVMS, Linux and major UNIX platforms – and it is deployed on systems ranging from two to over 10,000 simultaneous users.



Try a better database. For free.

Download a free, fully-functional, non-expiring version of Caché or request it on CD at www.InterSystems.com/match3

© 2002 InterSystems Corporation. All rights reserved. InterSystems Caché is a registered trademark of InterSystems Corporation. 10-03

Catalyst Aims to Make Java Builds a Picnic

Embeds open-source ANT into its latest Openmake build management tool

BY JENNIFER DEJONG

In its ongoing quest to free developers from writing scripts to manage the build process, Catalyst Systems Corp. this month announced version 6.3 of Openmake.

While the latest version of the build management tool improves the build process for all types of developers, including Microsoft .NET and C++ developers, it is particularly focused on Java developers, said Catalyst vice president of marketing Patrick Egan.

By embedding the open-source Java build tool ANT into Openmake, version 6.3 eliminates the need for Java developers to write custom ANT scripts and build Java classes. "It offers Java developers the ability to control all ANT tasks without having to write lengthy scripts," said Egan, noting that in the past, they had to write Perl scripts to get into the underlying build types in Openmake.

Once a developer maps out the process using the built-in templates in 6.3, that process is stored so it can be used by other team members, added Egan.

Also new to 6.3 is an Eclipse plug-in, aimed at Java developers using WebSphere, which automates the build process for enterprise applications without having to write any XML scripts, said Egan. In addition, it eliminates the need to run WebSphere in what Catalyst calls a "headless" mode to execute the build, he added.

The latest version of Openmake also offers enhancements for .NET developers. Openmake replaces the builder in Visual Studio .NET, said Egan. It scans all .NET project files, gathering information to generate an Openmake build control file, which automatically builds target definitions as needed.

Egan emphasized that enterprise applications, such as payroll, are made up of multiple components that are typically written in a wide range of languages, running under multiple operating systems. A key benefit of Openmake 6.3 is that it allows developers to carry out a single build process. It lets them think in terms of "building the payroll application," instead of having to build each

individual piece, he said.

Although Catalyst's goal is to "eliminate the idea of manually scripting anything," Egan noted that because Openmake pro-

vides access to build types, it is customizable. "You can still use Perl to script your build process for any platform," he said.

Catalyst estimates that, on

average, developers spend an hour per day tinkering with builds. But once they automate the process, they can focus on writing code instead, said Egan.

Openmake 6.3 pricing is based on a client/server model starting at US\$299 per client and \$3,900 per knowledgebase server, according to the company. ■



Save time on the job with Crystal Reports 10.

The best in business intelligence now offers the best in business reporting. New Crystal Reports® 10 is a faster and simpler way for developers to access data and integrate it into Java, .NET and COM applications. Get simplified data connectivity, formatting and application integration; reduced report maintenance; and standardization across platforms. Learn more about Crystal Reports 10 and Crystal Enterprise™ 10, and access technical and evaluation resources at www.businessobjects.com/v10/054 or contact us directly at 1-800-877-2340.



SOAPscope 3.0 Supports Basic Profile

BY YVONNE L. LEE

Mindreef Inc. has updated SOAPscope with additions that work with the Web Services Interoperability Organization's (WS-I's) Basic Profile testing tools.

Web services developers can drop the WS-I's tools into SOAPscope and gain more precise information about how the service may have failed to meet the interoperability specification.

"If the WS-I testing tools

have reported a problem, our product points you directly to the problem in the source document," said Mark Ericson, Mindreef's chief architect and co-founder.

SOAPscope 3.0 adds a SOAP

message analysis to the WSDL analysis that was available in SOAPscope 2.0. The analysis feature checks SOAP messages for formatting and conformance to the SOAP specifications and for conformance to the WS-I's Basic Profile 1.0. It also makes sure that the service is communicating with the

applicable WSDL file.

In addition, the new version includes graphic visualization of the Web service's performance, as well as advanced HTTP support that works with SSL and basic security authentication.

SOAPscope 3.0 can work directly within Visual Studio .NET. According to Ericson, a similar plug-in is planned for Eclipse.

The Hollis, N.H., company has introduced new subscription-based pricing with version 3.0. The new version is US\$99 per year per developer seat, which includes support and upgrades. ■

WEBSphere 6 USES FEATURES OF J2EE 1.4

BY EDWARD J. CORREIA

IBM Corp. early last month released a preview version of WebSphere 6, its forthcoming Java application server that incorporates features of J2EE 1.4 that it says will improve Web services interoperability.

Most significant, according to Bob Sutor, IBM's director of WebSphere software, will be its embrace of the Web Services Interoperability Organization's (WS-I's) Basic Profile 1.0. "If somebody builds a Web service and it's WS-I compliant, we can talk to them; it doesn't matter if it's built in Java or not," Sutor said.

The preview release also will include Java Connector Architecture 1.5, which Sutor said brings support for synchronous and asynchronous transactions with bidirectional communications. "This gives applications the ability to either wait for an immediate response, or expect it to come at some later time. It makes Java applications first-class citizens alongside SAP, Siebel and PeopleSoft."

Also supported is Java Message Service (JMS) pluggability, which Sutor said allows the service to work directly with an existing database to gain persistence and help with failure recovery.

The free preview edition is available now and can be downloaded at www.ibm.com/developerworks/websphere/downloads. WebSphere 6 is due for general availability in the second half of this year. ■

 **n software**

IP*WORKS! RED CARPET™ SUBSCRIPTIONS. NO BOUNDARIES.



Today, there are hardly any IT projects without an Internet aspect. Whether it is about connections to existing systems or services, or brand new Internet-based implementations, connectivity plays an important role in all systems. Choosing the right tool for the job and not limiting your ability to choose is as important as ever. That's why we give you EVERYTHING in one package: components for every major protocol, from FTP to IMAP to SNMP, SSL and SSH security, S/MIME Encryption, Digital Certificate management, Credit Card Processing, Compression, Instant Messaging, and even e-business (EDI) transactions. No licensing restrictions, so your team can code on their work machines, their notebooks, or even their home machines. No technology restrictions, so you decide what to choose: .NET, COM, C/C++, Java, and even Pocket PC, Linux and Mac OS X. Plus quarterly update CDs with free product updates, free upgrades, and new releases so you always stay on the leading edge. Last but not least, one low price your CFO won't even notice, including site licensing in less than 5 figures. For more information, please visit us at www.nsoftware.com and click on SUBSCRIPTIONS, or just give us a call at 800-225-4190.

Developers love creating code... Managers crave process control... Bridge the gap with Seapine CM.

Software development is a team effort with developers, testers, and management all working toward one goal — delivering the highest quality product on time.

Built on award-winning TestTrack Pro and Surround SCM, Seapine CM brings structure to source control and issue management, improving communication while accelerating product development.

Seapine CM helps your team...

Define custom change request workflows, putting you in control of who makes changes and who authorizes the closure of issues.

Associate source code changes with defects or change requests.

Gain a thorough understanding of how much work remains before project completion.

View complete audit trails of what changed, why, and by whom.

Understand how close you are to release—how many issues are open, how quickly are you closing them, how many are re-opened?

Successful team-based development requires the proper process supported by the right development tools. Tools that are flexible, easy to use, secure, and scalable—like Seapine CM.

Features:

Complete source code control with private workspaces, automatic merging, role-based security and more.

Comprehensive defect management—track change requests, bug reports, feature requests and more.

Fast and secure remote access to your source files and defects — work from anywhere.

IDE integration with JBuilder, Visual Studio, Eclipse, and other leading development tools.

Advanced branching, triggers, email notifications, fully configurable workflows, and customizable fields put you in complete control of your process.

Open interfaces—triggers, email notifications, SOAP support, XML data exchange, and ODBC clients.

Scalable and reliable cross-platform, client/server solution supports Windows, Linux,

Achieve major improvements in software development performance through better tool integration and process automation. Manage defects, development issues, and change requests with award-winning TestTrack Pro and gain complete control over your source code and change process with Surround SCM. Seapine's integrated change management tools are feature rich, highly scalable, Web enabled, and cross platform. Streamline your development process with Seapine CM and help your team deliver quality software products on time, every time.

Learn more about the
Seapine CM suite at
www.seapine.com
or call 1-888-683-6456



News Briefs

MORE PRODUCTS

< continued from page 6

DataDirect Technologies Inc., has been upgraded to be compliant with the J2EE 1.4 specification, according to the company . . . DataPower Technology Inc. has updated the firmware for its **XA35 XML Accelerator** and **XS40 XML Security Gateway**. Version 2.5 adds a new authentication, authorization and auditing framework; enhanced multistep Web-based wizards for defining XML processing; and a new optional parsing engine for processing non-XML data . . . Visual Numerics Inc. has updated its **IMSL C Numerical Library**. Version 5.5



has a new nonlinear constrained optimization algorithm for handling large and complex optimization problems; new data-mining algorithms for factor analysis and clustering; new time-series functions for multivariate and multichannel time series; and expanded statistical coverage for experimental design and analysis and survival analysis. Pricing begins at US\$1,395, depending on operating system . . . Ong-Tech LLC has launched **Enterprise Server**, its .NET middleware for working with data entities, queries and services in a platform- and language-independent manner. It exposes Oracle, SQL Server, MySQL, PostgreSQL, OLE and ODBC databases as Web services.

PEOPLE

Intalio Inc., which sells business process management software, has hired **Wade Chambers** as VP of engineering. He most recently held that same title at Opware Inc., the company founded by Marc Andreessen as Loudcloud . . . **Beth Lilienstein** has been hired as VP of software development for ISG Solutions. Previously, she was the project manager for Web integration at Advanced Solutions International Inc. ■

Conference Takes Web Services Over the Edge

BY YVONNE L. LEE

What was Web Services Edge is now Edge 2004, and will include four Web services tracks—Web services overall, Java, .NET and XML—and will add an MX track about all things Macromedia.

“What we learned from our audience and our exhibitors was that they needed more time to see what would stick and if there was an ROI now,” said Gisha Davida, president of the show’s producer, SYS-CON Media Inc., concerning the broader focus.

“We decided that Web services has become so much of a given now—within the firewall and, increasingly, beyond it—that it made more sense to de-emphasize now the newness of loosely coupled, distributed computing and flag up instead the ‘edginess’ of the overall technical program,” said SYS-CON group publisher Jeremy Geelan.

The Boston Web development show keynotes will start on Feb. 24 at 10 a.m., with

Chris Hjelm, CTO of Orbitz LLC, speaking on “Web Services as a World Class Technology Platform.” Macromedia Inc.’s general manager for designer and developer products, David Mendels, will tie the conference’s traditional focus together with the new track in his Feb. 25 keynote, “SOA + RIA = ROI,” where he will give his take on how service-oriented architectures and rich Internet applications will produce a return on investment. IBM Corp.’s director of e-business standards strategy, Robert Sutor, will finish the keynotes on Feb. 26, with a talk on “Web Services at Middle Age,” and how Web services are moving from the standardization phase to becoming a stalwart in the IT infrastructure.

“Our experience with real-world developers attending previous Edge shows has been that what [attendees] most want from a conference program is help getting past mere



CONFERENCE: Feb. 24-26
Hynes Convention Center, Boston

CONFERENCE HOURS:
Tuesday, 9 a.m.-4 p.m.
Wednesday, 9 a.m.-5 p.m.
Thursday, 9 a.m.-4 p.m.

EXHIBIT HOURS:
Tuesday, 11 a.m.-6 p.m.
Wednesday, 11a.m.-4 p.m.

www.sys-con.com/edge2004

protocols and standards and even platforms, so they can begin actually building Web services themselves. The MX sessions we have added to the technical program this time are full of hands-on practical examples of this sort,” said Geelan.

In addition, Intel Corp. will sponsor a “mobilized software” pavilion that Davida said will feature a handful of partners and encompass phone, handheld, laptop and wireless software.

Davida said he expects around 2,500 attendees, up 10 percent from last year. He also expects the same number of show floor exhibitors as there were last year—about 30. ■

USE MICROSOFT® VISUAL STUDIO® .NET TO CREATE APPLICATIONS FOR ALL OF THESE DEVICES...

Crossfire™ by AppForge® enables Microsoft developers to create multi-platform mobile and wireless applications using a single, standard development environment. This means more efficiency and better marketability for the developer, and more revenue and profits for solution providers.

Crossfire

Developed by
Visual Studio .NET



- UIQ - Palm OS - Nokia Series 60 - Pocket PC - Symbian OS -

AppForge offers the same multi-platform development capabilities for the Visual Basic developer through our MobileVB® products. Try any of our products FREE for 30 days at www.appforge.com.

AppForge

Visual Studio, .NET, and Pocket PC are trademarks of Microsoft Corporation. Copyright © 2003 AppForge Inc.

SOA

← continued from page 1

expose them as Web services.”

Among Fabric's competitors is IBM, with its “on demand” strategy. Ivers criticized it as being exclusionary and monolithic. “In spite of some of the handshaking I’ve seen on stage, IBM has a relatively proprietary view of SOA.”

Bob Sutor, IBM's director of WebSphere software, asserted the opposite, pointing to the upcoming release of WebSphere 6 Application Server as its most interoperable ever. A preview edition in January incorporated the Web Services Interoperability Organization's Basic Profile 1.0 and JCA 1.5 for synchronous and asynchronous transactions.

Due later this year, WebSphere 6, said Sutor, will form the basis of IBM's SOA strategy for on-demand computing. He added that by employing WebSphere's service-oriented architecture, adaptation to business processes within an enterprise can be greatly simplified. “In fact, there's almost a one-to-one relationship between the piece of business process and the services you're invoking. So if you

have the capability of building services, you can actually build on-demand in an easier way.”

IBM faces competition from Sun Microsystems Inc. and its N1 and Java Enterprise System. Peter Jeffcock, Sun's N1 marketing manager, said Sun's view of SOA encompasses more than software. “N1 is the mechanism to help you manage the entire environment so you can deliver services on demand or when you need them. It comprises the application and its interfaces, the middleware, the operating system, the hardware and the network. All those things together deliver a service, and that's what N1 manages.”

Jeffcock said that as in any hardware grid, control of both hardware and software is essential to efficiently manage business services, “and to be flexible enough to respond to business needs, changing market conditions or whatever.” Jeffcock claimed that applications need not change to take advantage of N1, but it helps. “The first thing that needs to be done is development of standards over time,” he said, referring to the distributed resource management application API (DRMAA), an



IBM's view of SOA is relatively proprietary, claims WebMethods' Ivers.

WebSphere 6 will be the company's most interoperable app server ever, says IBM's Sutor.



effort co-chaired by Sun and Intel that specifies how applications could talk and gain access to hardware resources.

For a certain class of apps that tend to be more batch-oriented or compute-intensive, Jeffcock explained, DRMAA offers a standardized way to flex hardware up and down. “In order to get an important problem solved quickly, I could ask for 100 computers,” for example. DRMAA specs, now in final draft, were submitted to the Global Grid Forum, an industry organization promoting the development of common technical specifications, in March 2003.

SOFTWARE-ONLY GRID

With its Oracle 10g Application Server, Oracle Corp. claims to offer developers the best of both worlds. Ted Farrell, Ora-

cle's chief architect for application development tools, defines the company's SOA solution as a combination of database clustering and shared cache, spread across the entire architecture communicating to the application server and disk farms.

Farrell claimed that 10g would be less susceptible to error than competitive grid offerings, and offers an improvement over manual allocation of disk, database and processor resources. “[With Oracle's grid], you combine all the machines you have and register them with the grid, so it's aware of all the hard disks, database nodes and app server, and you decide how to distribute the resources.”

Policies can be established, he continued, according to CPU utilization, time of day, day of the week and so on. “If a job is

running between 10 p.m. and 4 a.m., I can add more resources to that particular application.”

Another competitive advantage Farrell claimed is zero code change. “IBM and others have a grid API you have to download and start making calls to. With ours, you just throw apps on the grid and it works, the same way J2EE does with the distributed caching concept.”

Though it does require application changes, IBM's Sutor defended the grid API. “We've been talking [about] grid for two or three years. Oracle does a tiny little bit of gridlike something; the Global Grid Forum is far beyond anything Oracle is doing.”

Ron Schmelzer, senior analyst at research firm ZapThink LLC, backs up Sutor's assertion about Oracle. “Oracle is talking about server virtualization—the ability to manage and aggregate functionality across multiple systems. They mean it in terms of data, because as much as they'd like to be an application server company, Oracle is still a data company. Would you use Oracle to manage a farm of BEA WebLogic application servers? I would be hard-pressed to say that would be a reality.” ■

Does your Team do more than just track bugs?

Alexsys Team does! Alexsys Team 2 is a multi-user Team management system that provides a powerful yet easy way to manage all the members of your team and their tasks - including defect tracking. Use Team right out of the box or tailor it to your needs.

Download Your
Free Trial at
www.alexcorp.com



Track all your project tasks ...

- Defects
- New Product Features
- Help Desk Cases
- Action Items
- ISO 9000 Issues and more...

... in one database so you can work together ...

- Keep your project on-track with up-to-date status
- Allow team members to see their assignments and stay on top of the issues
- Find the information you want when you want it
- Run effective meetings using online agendas
- Balance project and team member workloads
- Keep a complete history of your work and more ...

...to get projects done.

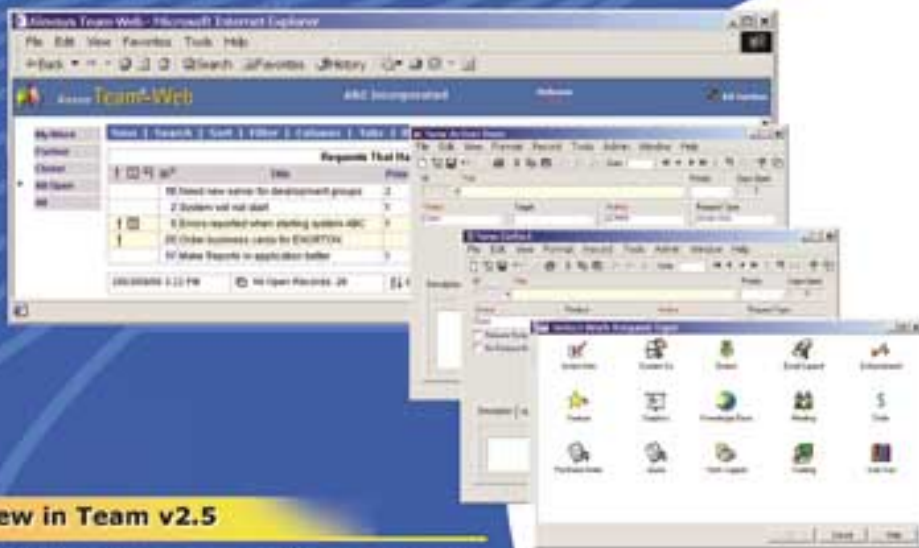
Team 2 Features:

- Affordable and scalable
- Multiple work request forms to make data entry a breeze
- Automatic Escalations to stay-on-top of critical tasks
- Knowledge base for you and your customers to find answers fast
- Time recording to manage budgets and improve productivity
- Web Access to work where and when you want
- Secure web forms for customers to get help 24/7

Download a free, no obligation trial version at www.alexcorp.com.
Need more help, give us a call at 1-888-880-ALEX (2539).

New in Team v2.5

- Custom Groups for complete access control
- Spell checking
- Powerful list searching
- Advanced request forms with default values and field choices for each type of task
- AND MORE!



JAVA TOOLS

← continued from page 1

JCP members who are tools vendors, tools vendors and extension makers who may not be JCP members, and the customers of both. Tools vendors include any one that makes Java IDE tools.

"The founding companies are fairly equal in their roles," said Ted Farrell, Oracle's chief architect for application devel-

opment tools. Those responsibilities include providing content to a JTC Web site (www.javatools.org), getting their customers to the Web site, and posting some new ideas about technology that they'd like to see developed, he said. Oracle built some of the content of the JTC Web site, Farrell said.

"If a [Java Specification Request] hasn't been filed, we may foster a discussion

around a particular pain point a customer has mentioned," said Dave Cotter, director of product marketing for BEA's WebLogic. "A core member may take the lead in establishing a JSR."

Although the function of the core members on the site has been spelled out, some don't feel that the group's overall mission and relationship to the Java Community Process

has been elucidated.

"The JTC hasn't taken the approach yet to formalize the relationship between the JTC and the [Java Community Process]," said George Paolini, Borland's vice president and general manager of Java solutions. In a statement, Borland said, "There is no mechanism by which the JTC can actually influence any part of the JCP process, without some set of changes to the JCP structure itself. Consequently, Borland has decided to await a formalized



Borland is waiting for the JTC to formalize its relationship with the JCP, says Paolini.

road map and process between the JTC and the JCP before making a decision to join."

Because the group was announced two weeks after Sun said it would not join IBM's Eclipse foundation, speculation and published reports indicated that the JTC was Sun's attempt at circumventing Eclipse.

Analyst Rikki Kirzner, research director for application development and deployment at IDC, said she "absolutely" thought the group

was targeted toward Eclipse. "Otherwise Sun would have joined Eclipse," she said.

"In the eyes of the public, that's a conclusion you're likely to jump to," said Sun's Oestreich.

"In reality, whether they actively participate as a company, they're going to be affected by the outcome because the outcome is going to trickle into the JCP."

One who doesn't see the JTC as an attack on Eclipse is Eclipse chairman and IBM employee Skip McGaughey.

"The Java Tools Community is about requirements," McGaughey said. "It's an effort by a series of vendors and users to consolidate requirements in the Java Community Process—requirements that establish the specifications that Eclipse then ends up implementing."

Eclipse is not a member of the JTC. "Eclipse is in the process of forming this independent organization and any effort to join independent entities has to be a decision of the new board," McGaughey said. ■

LINUX VENDORS

← continued from page 8

Also part of the equation was SCO's refusal to give specific details of how and where it believed its intellectual property rights were infringed.

"By refusing to disclose the basis of the claims, they're preventing the Linux community from remedying the potential infringement," said Mulloy. "There's a fundamental fairness issue in terms of where's the infringement and how can it be fixed."

Embedded systems software maker MontaVista also said it has been approached by embedded device manufacturers asking whether to pay the \$32 per

device that SCO has sought from embedded Linux users.

"If you build embedded devices based on embedded Linux, and you're all of a sudden told you have to pay a \$32 per-unit fee or redeploy, in some ways the worry's even greater for the enterprise," said MontaVista's director of strategic marketing, Bill Weinberg.

SCO charges US\$699 per processor for the enterprise license.

In SCO's official response, president and CEO Darl McBride said, "If vendors feel so confident with the intellectual property foundation under their massive contributions into Linux, then they should put their money where their mouth is and

protect end users with true vendor-based indemnification."

Novell then said it would indemnify customers who bought SUSE Linux Enterprise Server 8 and who after Jan. 12 obtain upgrade protection and a qualifying technical support contract from Novell or from a participating Novell or SUSE Linux partner.

IBM has not indemnified its customers. "IBM's working with customers on a case-by-case basis," said company spokesperson Trink Guarino, adding that IBM is the only company that has been sued so far.

In related news, SCO expanded its Intellectual Property License for Linux to international customers. ■

Before spending choose all that apply **of money**

tons
boatloads

on choose all that apply **solutions,**

business intelligence
 price optimization
 competitive intelligence
 revenue management
 CRM
 business process management
 business activity monitoring

make sure you can choose all that apply

aggregate
 integrate

data from choose all that apply **with ease.**

inside firewall
 outside firewall

Choose one. QL2 Software

QL2 Software provides tools and solutions for collecting and integrating data from all sources, no matter location or format. Logon to www.QL2.com for free product downloads or a free proof of concept.

WWW.QL2.COM or call 800-750-8830 or +1-206-443-6836

SOLUTIONS FOR LANGUAGE INTEGRATION

JuggerNET now available
for seamless, easy
Java-.NET integration

Extend Java to .NET with JuggerNET™, the only technology that is as easy and reliable as pure Java or pure .NET programs.

Check out these solutions:

- ★ Use any Java Message Service with .NET
- ★ Provide .NET clients easy access to EJB
- ★ Integrate Java with COM through .NET
- ★ Call J2EE servers from VisualBasic

Download a free trial today:
www.codemesh.com

codemesh
www.codemesh.com
978-369-8583

Codemesh is a registered trademark of Codemesh, Inc. P.O. Box 426, Carlsbad, MA 02583

ECLIPSE

◀ continued from page 1
menu," he said.

Other enhancements to the user experience include improved welcome pages and an overall updated, more visually appealing look. For instance, the toolbars associated with a particular view will not be visible until you actually hone in on that view, said Wiegand.

The more responsive UI will allow developers to carry out background tasks, such as compiling code or performing a search, while simultaneously working on other tasks, such as editing files, said Wiegand.

Version 3 will move Eclipse toward what Wiegand called a "rich-client platform," which will allow developers to use the framework to build non-IDE applications. "For instance, you could build something as trivial as a calculator application," he said.

"The rich-client platform is the big change in 3.0," said Uttam Narsu, an analyst at Forrester Research Inc., noting that moving beyond IDE applications will make the Eclipse platform attractive to a wider

range of commercial developers, not just those companies that want to build IDEs.

Increasing the number of commercial developers that build applications on the framework is a key goal for Eclipse, particularly since the organization announced late last year it plans to become independent of IBM. But the group is not moving away from its open-source roots.

Incorporating under the name The Eclipse Foundation makes clear that the open-source goals of the project won't be forgotten, said Wiegand. "But at the same time, the commercial role is important, too."

Eclipse chairman and IBM employee Skip McGaughey emphasized that the organization is not undergoing an actual name change. It will continue to be known as Eclipse, in much the same way that The Apache Software Foundation is referred to as Apache. "Everyone will refer to it as Eclipse," he said.

He said that while the establishment of The Eclipse Foundation is expected to become official early this month, the

WHAT'S NEW IN 3.0

According to John Wiegand, platform lead for Eclipse, when version 3.0 of Eclipse is released in June, it will provide:

- An updated, more visually appealing user interface, which can effectively manage more than 100 plug-ins.
- A more responsive user interface that enables developers to carry out background tasks, such as compiling code or conducting searches.
- A rich-client platform, opening the framework to developers building non-IDE applications.

organization is not likely to announce the appointment of a president, corporate counsel and full-time paid staff until the end of this month.

PRESERVE AND PROTECT

McGaughey noted that as Eclipse establishes itself as an entity separate from IBM, it remains committed to "preserving and protecting the open-source paradigm." He said that while commercial developers will be expected to pay a US\$5,000 membership fee, open-source developers will not be required to pay any fee.

IDC analyst Rikki Kirzner said that the decoupling of Eclipse from IBM is critical to

its growth. "Eclipse was perceived as being a pure IBM initiative," she said. "Commercial vendors have told me the decision-making process was too controlled by IBM," added Forrester's Narsu. He said that, for example, they felt pressured to integrate their products not just with Eclipse, but also with WebSphere. "IBM has been a good parent to Eclipse, but it's time to let the bird fly," said Narsu.

The separation should encourage more developers to base commercial products on Eclipse. McGaughey said doing so will save commercial developers time and money because they do not have to write and maintain the infra-

structure code.

Michael Bechauf, vice president of NetWeaver Standards at SAP AG, which built SAP NetWeaver Developer Studio on Eclipse, agreed. "As a business application vendor, building a general-purpose Java development environment is not our core business," he added.

NetWeaver Developer Studio is a Java IDE for SAP developers, who previously relied on SAP's proprietary language, ABAP.

Narsu and Kirzner both said that while they are pleased about the separation of Eclipse from IBM, the fragmentation among players in the Java community makes it harder for Java to compete with Microsoft's .NET Framework. "It's too bad NetBeans and Eclipse didn't happen," said Narsu, referring to Sun's decision to forward its own consortium, instead of joining Eclipse.

"It's a shame that Sun and [BEA] couldn't work closely with IBM," added Kirzner, noting IBM's decision not to participate in the Java Tools Community effort. ■

SPENDING TOO MUCH TIME INTEGRATING XML AND DATABASES?



Cut development time with Allora™

Allora™ offers advanced, bi-directional transformation between XML data and relational databases. Graphical tools let you visually map XML elements to all major databases. IDE wizards support multiple platforms including XMLSPY®, JBuilder®, JDeveloper, Sun™ ONE Studio®, and many others. Allora's runtime engine includes a rich API to write XML data to your database and read relational data as XML. Available for both Java and Windows platforms for portability and performance.

Download Allora -
And make the most of your days and nights.
www.hitsw.com/xml



www.hitsw.com • phone: 1-408-345-4001 • e-mail: info@hitsw.com

HIT SOFTWARE
Open Up Your Data

BUSINESS INTELLIGENCE

SD Times

SOFTWARE DEVELOPMENT

The Industry Newspaper for Software Development Managers

NOVEMBER 18, 2004
ISSUE NO. 090

Study Finds Development Managers Confused About 'It' 3

Macromedia To Buy eShip 3

ICAN 5 Sees Beyond Disparate Systems 5

Gerda Interprets, Executes UML Models Directly 5

IBM Puts Its Stamp On Source Validation 6

Merix Models Intelligence For the Enterprise 10

Relativity Opens Apps To Analysts 11

Qsarc UML Management Tool Now Tracks Bugs 11

VeriWeb Gets Into Screen 12

Recreation Updates C++ Libraries 12

Eupia Enhances Its Team Developer Environment 14

Latest LISA Test Tool Does More Automatically 15

TimeSys Offers Soup-to-Nuts Development Solution 17

KnowHow Aims to Simplify Data-to-Device Transfers 17

THINGS OF A THREE-PART SERIES

SPECIAL REPORT: Web Services

How Do The Interoperable, Say Developers 19

A B2 MEDIA PUBLICATION \$19.95

www.sdtimes.com

'STINGER' BUZZES INTO BETA, TYING DB2 TO .NET

BY YVONNE L. LEE

IBM Corp. demonstrated tools designed to make it easier for developers to use IBM's DB2 database with .NET applications at Microsoft's Professional Developers Conference held in Los Angeles in late October.

"These are things that we have demonstrated since June and are now making available on the Web for downloading," said Jeff Jones, director of strategy for IBM DB2 information management software.

Code-named "Stinger," the beta software includes add-ons to DB2 to integrate the database directly into Microsoft's Visual Studio .NET 2003 as well as with IBM's Rational XDE.

Developer visual data models. These add-ons make it possible to create models and make them into parts of a database, as well as to create the Web services that connect to them.

"It's tying it all together so that you don't have to leave one environment to work in another," said Eric Neuberg, market manager for model-driven development at IBM's Rational Software division.

The database add-on now takes advantage of Microsoft's native ADO.NET Data Provider method, which makes DB2 integrate with .NET applications more smoothly than using ODBC or more generic data-

base." Despite the firm, however, the show was packed, with more than 7,000 developers in attendance, according to the company.

While Microsoft still isn't ready to commit to a date for Longhorn's release, all indica-

At PDC, Bill Gates discussed Microsoft's investment in R & D.

Microsoft Steers 'Longhorn'

Developer conference focuses on internals of Windows XP successor

BY ALAN BUCHHEIT

LOS ANGELES — Under a heavy sky that combined the worst of rain and wildfire smoke, Microsoft Corp. used its annual Professional Developers Conference to discuss the internals of the next major update to Windows, code-named "Long-

Nokia Cleans Up Its SDK Act

Developer Platform 2.0: consistent device capabilities

BY EDWARD J. CORREIA

In late October Nokia Inc. announced that it was cleaning up its technology act, which had been speckled with dozens of mobile devices that may or may not run applications developed for others in the same series. This follows moves a month earlier, in which the company cleaned up its executive act with the formation of Nokia Enterprise Solutions, one of four new groups intended to help the company focus on convergence, new mobility markets and growth.

"What we were doing was to launch a whole lot of devices in the market with no messaging around what [developers] could depend upon when those," said Lee Epping, Nokia's vice president of developer operations. The result, she admitted, was a laundry list of products that not only lacked consistency, but was a constantly moving target for developers.

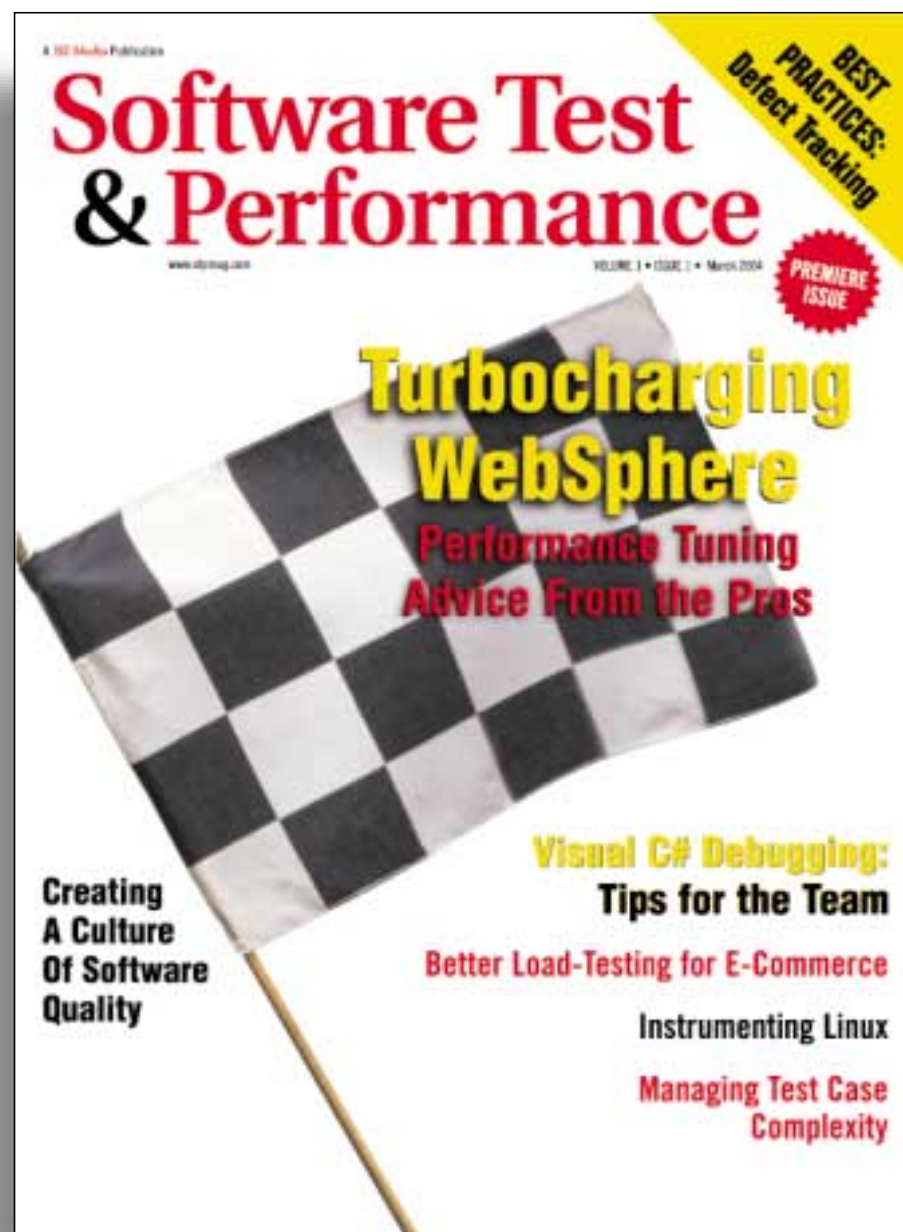
"It wasn't clear that if we changed licensing technology in a [device], we were telling developers we had changed it. So if their application relied on that license, it wouldn't work."

Epping, who spent the past six years involved in enterprise developer activities with HandSpring and Palm, claimed that Nokia is addressing the problem with the introduction of Developer Platform 2.0, Series 90, a set of specifications for its high-end mobile devices running Symbian OS 7.0 and J2EE MIDP 2.0. Nokia in the spring of 2004 will begin shipping the 7700, the first Series 90 2.0-eligible smartphone.

"Now we've defined how software for each platform," she said. "Every time we launch a

Source: Nokia Inc.

QUALITY ASSURANCE



Premiering
March 22

To apply for a FREE subscription,
go to www.stpmag.com

For advertising, call publisher Ted Bahr at
516-922-2101 x101 or e-mail ted@bzmedia.com

Over **175** classes in:

- ▶ C++
- ▶ Java
- ▶ XML
- ▶ .NET
- ▶ Mobile
- ▶ Security
- ▶ Emerging Technologies
- ▶ Modeling, Design & Quality
- ▶ People, Process & Methods
- ▶ Web Services Technologies
- ▶ Requirements & Analysis

**EARLY BIRD
DISCOUNT**
Register by
February 13 and
save up to
\$400

PLUS:

NEW Expo, Panels,
Case Studies,
Roundtables, BOF's
and exciting Special Events



SOFTWARE DEVELOPMENT

CONFERENCE & EXPO

MARCH 15-19, 2004, SANTA CLARA, CA

ADVANCE YOURSELF

REGISTER TODAY AT WWW.SDEXPO.COM

Transmeta Shrinks Crusoe, Grows Embedded SDK

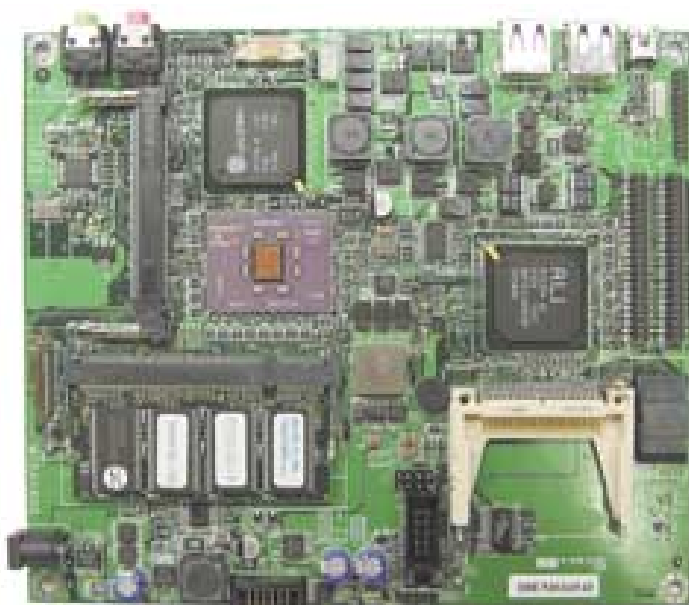
Claims new kit for CE .NET, XP Embedded now includes all needed drivers

BY EDWARD J. CORREIA

Chip maker Transmeta Corp. used January's Consumer Electronics Show in Las Vegas to launch the Crusoe Embedded System Development Kit, billing it as an all-inclusive kit optimized for Windows CE .NET and Windows XP Embedded.

The company also unveiled the TM5700 and TM5900, smaller versions of its Crusoe low-power Pentium III-class processor that it claims pack the same processing power into a 21mm square; Transmeta's flagship TM5800 x86-compatible processor measures 34.5 x 25mm.

While targeting embedded Windows is not new to Transmeta, John Heinlein, director of systems marketing, said the new Embedded SDK is different. "We're now providing all the necessary pieces for developers to get development done quicker," including a development board built around the TM5800 and the corresponding support package. The tools work with the developer's versions of Platform Builder for



Transmeta claims its new 6 x 7-inch board boots Windows CE 4.2 out of the box.

Windows CE or Target Designer for XPE, he said.

"One of the challenges for CE [development] is the device drivers; many of the drivers and components are not standard," said Kathy Yu, Transmeta's segment manager in charge of Windows CE and XPE. "So we put a board together and developed the

device drivers ourselves." Also included is a modified version of Microsoft's boot loader, which Yu said acts as a BIOS and permits developers to immediately boot Windows CE .NET out of the box and begin adding their own applications.

Yu described the development board as a smaller version of the industry-standard ITX

form factor, measuring about 6 x 7 inches. It's built around an 800MHz version of the company's low-heat x86-compatible processor with 512KB of L2 cache and integrated North-bridge core functionality, including DDR memory controller, serial ROM and 32-bit PCI interfaces.

The board's single DDR memory slot comes populated with a 128MB SODIMM. Other interfaces include keyboard and mouse, touch panel, a type-III Mini-PCI connector, audio in/out, LVDS video out, VGA out, LCD backlight connector, and Compact Flash connector. Also included are headers for GPIO, two ATA Enhanced IDE drives and one serial port. "This would be suitable for building networking devices, firewalls, ruggedized tablets for military and commercial use and for wearable computers," Heinlein

said. A debugging port, device cables, AC adaptor and rechargeable Li-ion battery also are provided.

While the 5700 and 5900 also will have their own reference boards, Yu said that developers purchasing the Embedded SDK's 5800-based board also can use it as a baseline for building apps for any of Transmeta's new circuits. "Migration is made easy because

they are in the same product family," but Yu stressed that the boards themselves are not interchangeable.

The Crusoe Embedded System Development Kit was scheduled to begin shipping in January for around US\$1,200. The TM5700 (with 256KB L2 cache) and TM5900 (with 512KB L2 cache) processors are scheduled to begin shipping by March with speeds as fast as 1GHz; pricing is dependent on volume. ■



The smallest Crusoe ever still has Pentium III power, according to the company.

Macromedia Goes Mad Over Mobile Media

Hires former Microsoft VP, forms Mobile and Devices division to boost licensing

BY EDWARD J. CORREIA

Macromedia Inc. in January formed a Mobile and Devices division, focused on recreating in the mobile world the ubiquity of its Flash player that the company now has gained in desktops.

Joining the company as the division's founding president is Juha Christensen, former vice president of Microsoft Corp.'s Mobile Devices division and co-founder of mobile operating system developer Symbian Ltd. Christensen said Macromedia has had designs on the mobile space for some time, with licensing agreements already in place with Motorola, Nokia, Sony and many others. A scaled-down version of the desktop edition, the Flash play-



Flash helps mobile apps be portable, says Macromedia's Christensen.

er for mobile devices occupies between 200KB and 900KB of device memory, depending on the feature set and target operating system, including Pocket PC, Symbian OS and a variety of other mobile and embedded systems.

Christensen said the division will seek to create and expand relationships with mobile operators. "In many situations, the operator serves as a proxy for end users; if you want to get really close to the subscriber, the operator is the best source. By working with operators, you can craft mobile experiences and create service bundles."

The news is interesting to developers, he said, because it opens a new channel for distri-

bution of their Flash applications. "Any developer with applications or content is interested in an audience. And the operator acts as a hub to get their applications out to a large number of subscribers."

Christensen asserted that Flash also helps address the

deployment challenge presented by the enormous diversity of today's mobile-device hardware and software. "Mobile devices out there today are based on a variety of operating systems. While they have quite advanced computing capabilities, what is missing is exciting

content and services that will set new phones apart from today's average phone. Flash puts something on top of those operating systems to enable large authoring and developer communities to provide applications that go across a wide range of devices." ■

I-LOGIX CLAIMS TO AUTOMATE MODEL-TO-PHYSICAL MAPPING

BY YVONNE L. LEE

I-Logix Inc. in mid-January released NodeAllocator, a drop-in to its Statemate system design and analysis tool suite that it claims automatically assigns functions from defined models to the physical architecture.

Normally, this is a painstaking, error-prone process, said

Adrian Whitfield, director of marketing. This mapping is typically done through hand-drawn charts, he said.


NodeAllocator simplifies the process, especially for complex systems such as avionics, Whitfield said.

"Because it is hard to do, you tend to go into the design with the architecture already in

mind, so you don't tend to have as much flexibility," he said. "This lets you explore the functional space separate from the architecture."

In addition, NodeAllocator displays bus and communication loading estimates to analyze network performance. It supports devices with multiple buses, which the company claims makes it possible to support more complex systems.

Pricing for NodeAllocator starts at US\$10,000 per seat. It is available immediately from the Camarillo, Calif., company. ■



Are you ready to
transform your data?

LGX Info

An **extended** reporting
platform for your enterprise

Web-based reporting has become integral to today's data rich enterprise. For LGX Info, reporting is only the beginning of the story as we help you securely transform data into reports and then into useful information. From one platform you can now not only design, build, and deploy reports but you can now create reporting applications complete with workflow, user driven reports, and customized reporting portals. All these things can be accomplished without coding with our building-block-like process of developing reports and applications.



- **Web-based Reporting** – At its core LGX Info is a robust .NET and XML based web reporting system with advanced options like security to the record level and the ability to build your own parameter pages.
- **Dashboards/Reporting Portals** – Build your own personalized reporting portals without any additional development tools.
- **Report Visualization** – Advanced charting options including charting on demand to visualize any report.
- **Adhoc Reporting** – Allow your true end-users to build their own reports in an easy-to-use browser based application.
- **Embedded Reports** – Integrate advanced reporting into your existing application via HTTP.
- **Report Processing** – Initiate a report as a background process from your application or schedule it as an event.
- **Workflow** – Build a comprehensive reporting system by adding your own multi-role approval and workflow application from within LGX Info.
- **Report and Content Publishing** – Create your reports and automatically publish them as html or store them in a variety of export formats.

Building On .NET

Forty years ago, when one programmer shared a stack of Fortran punch cards with another, the concept of third-party software components was born.

Much, of course, has changed since programs were punched out on cards. But today, as corporate .NET developers turn to third-party vendors for prewritten, inexpensive components they can plug into their enterprise applications, the concept remains essentially the same. Why waste time writing code to implement basic and/or highly specialized functions when someone else has already done the dirty work for you?

"It costs you more to code this stuff yourself," said Gent Hito, CEO of N Software Inc., which sells Internet protocol components for both Java and .NET.

"Enterprise developers want to focus on their business needs instead of the technical intricacies," added Alex Gladstein, director of the product group at Dart Communications Inc., which sells connectivity components for .NET and ActiveX.

Component vendors address a wide range of capabilities, augmenting the .NET Framework or enhancing what's already there. For instance, while the framework includes a basic e-mail protocol, it does not provide other Internet communications protocols, such as FTP, said Gladstein, claiming that Microsoft never intended .NET to address the more specialized needs.

"The proper way to accomplish things in the .NET Framework is with components. It was designed to do that," added Hito.

While some component vendors focus on specialized needs, others address more general capabilities, relevant to a wide range of developers. For instance, ComponentOne LLC and Infragistics Inc., widely recognized as two of the leading component vendors, sell suites that provide ready-made grids, charts, toolbars, menus and other tools to ease the process of designing the presentation layer.

"It would be lunacy to write these kinds of things yourself when for very little money you could turn to Infragistics and ComponentOne," said Dan Haight, executive vice president of FMS Inc. A good rule of thumb? If you can write it in a day, do it yourself. If it is going to take a week, buy it from a component vendor, he said.

FMS does not sell .NET components. It provides development tools

A plethora of commercial components are available for developers who don't feel the need to write their own

BY JENNIFER DEJONG



such as Total .NET Analyzer, which scans applications for bugs, unused code and other performance issues. It also offers .NET consulting services.

Another benefit of using components for the presentation layer is that they enable you to build interfaces that look and feel like the Microsoft Office applications to which corporate users are accustomed. "Besides corporate branding, mimicking the Office interface is a huge benefit in terms of training," said

Brad McCabe, director of development at Infragistics.

BUYING INTO THE CONCEPT

Since components typically cost anywhere from US\$99 to \$1,000, no one really disputes the economics of using them. Component makers say that it's not difficult to convince .NET developers to buy a component or two, but getting them to commit to the larger concept is still an uphill battle.

"Buying one component is not a strategic decision. But the decision to use components is a strategic one," said Dan Appleman, president of Desaware Inc., which sells a wide range of components for .NET and COM.

There are several reasons why component vendors believe adoption isn't happening faster. Chief among them is that the shift to "assembling applications" instead of writing the code yourself represents a major change in the developer's mindset. And that simply isn't going to happen overnight.

"Different [developers] are at different stages," said Shawn Nandi, a product manager for the developer division at Microsoft Corp.

"At one extreme, you build everything from scratch. In the middle, you take what has already been built and incorporate it in a new application. The other extreme—which is pure assembly—is actually gluing components together," he said.

Most corporate .NET developers today are probably in the middle, noted Dart's Gladstein. They aren't arguing with the concept of assembling applications. "Otherwise, they would still be writing in C++," he said.

Nonetheless, longstanding mindsets change slowly. "There is this concept of buy versus build. Lots of developers prefer to build, no matter what. They say, 'I have to do this myself,' just to show that they can," said Gladstein.

Another factor, said Desaware's Appleman, is that many developers who adopted .NET early on were C++ programmers and are now using C#. Unlike Visual Basic 6 programmers, who always have relied heavily on components, C++ programmers don't come from the component world. They are accustomed to building everything from the ground up. "They look at [a programming challenge] and say, 'Cool, this looks like fun. I'm going to write it,'" said Appleman, author of "Visual Basic.NET or C#...Which to Choose?" among other books.

Even if developers aren't inclined to build from scratch, some prefer not to have to deal with component vendors, simply to avoid the hassle of managing multiple vendors.

"My philosophy is that I would much rather stay in the framework," said Mark Lindley, manager of development services at Cimco Communications Inc., which sells customized voice and data services that integrate with the customer's environment. "It is generally less painful. You seem to encounter fewer problems if you stay within one world."

Lindley, who has been working with .NET since early 2002, said, in general, he can get what he needs from the .NET Framework and would turn to a component vendor only if he had to.

The component vendors admit they

► continued on page 22

.NET BUILDING

← continued from page 21

have an even bigger obstacle to overcome. Corporate developers are afraid they'll get burned doing business with a small software firm.

The fear isn't just hypothetical. Developers have been

burned by component vendors that have stopped supporting older products, said FMS' Haught. The market for Microsoft components originated with Visual Basic more than 10 years ago, and many of the small firms that served that market are no longer in business.

"But tools [for .NET today]

are generally reliable and bug-free," said Haught, adding that corporate developers should understand that the tools are as good as they can be, given the price-sensitive, competitive nature of the market. "Component vendors will simply never generate enough revenue to invest heavily in R&D

and long beta efforts," he said.

Before buying a tool, make sure the source code is accessible, said Desaware's Appleman. "You need to make sure the company is not going to leave you stranded," he said.

When corporate developers buy components, they are essentially choosing the track

record of the company, added N Software's Hito.

What ultimately sustains the .NET component vendors is the stamp of legitimacy that Microsoft has given them. "For all its faults, Microsoft has ensured the existence of a vibrant third-party community," said Haught.

The company sponsors the Visual Studio Industry Partner (VSIP) program, designed to ensure that component makers' products will plug into Visual Studio .NET and the larger .NET Framework, said Microsoft's Nandi.

"They run a great program," said Dart's Gladshstein. "We work on our products, with access to their engineers," he said. "Most [component vendors] recognize the stamp of legitimacy Microsoft gives us. Why would big financial organizations buy from us, if we weren't associated with Microsoft?"

But the relationship is not without conflict. The Microsoft .NET Framework is itself a code library, noted Desaware's Appleman. Does that create friction between Microsoft and individual component vendors?

"Microsoft is my best friend and my fiercest competitor," said Infragistics' McCabe. "Microsoft is constantly enhancing tools they have in the box. As they raise the bar, we have to innovate too. But this is often the case with software," he said.

McCabe said Microsoft is good at letting component vendors know when it plans to implement a change in the framework. "And there is definitely plenty of room out there for [Microsoft and third-party .NET component vendors] to innovate."

And if things go the way the component vendors hope, relying on components will become second nature to enterprise developers. "Think about the way people design integrated circuits today. There is no engineer in his right mind that doesn't use components. The reason you do that is because it's insane to do it any other way," said Appleman.

"No one builds everything from scratch," added N Software's Hito. "Why should software developers be any different?" ■



Trying to build everything is insane, insists Desaware's Appleman.

ActiveReports™ for .NET—Think Outside the Box.

100% Visual C# Reporting Engine and a Fully Integrated Designer

Integrated Toolbars

Toolbox Integration Label, Textbox, Checkbox, Picture, Line, Shape, Rich Textbox, Subreport, Page Break, Barcode, Ole Object and Custom Controls

Easy to use, banded, fully integrated report designer. Report Header and Footer, Page Header and Footer, Groups, Keep together control

Online help and detailed instructions

Built in report wizards and converters

Report and Field Explorer

Dynamic Help

IDE Property Integration

Complete Code Integration. Use Visual Studio, .NET editor to write code behind your reports in Visual C# or Visual Basic .NET. Unlimited Flexibility.

Easy to use Report Wizard helps you get started creating simple reports then customize them using the integrated designer.

Microsoft® Access Report Conversion wizard helps you convert existing Access reports to ActiveReports for Microsoft .NET.

ASP.NET Server Control helps you set up ActiveReports web client viewer options (HTML, ActiveX, Microsoft .NET and PDF viewers).

WinForms Viewer Control. Split views, multi-page view, text search, table of contents, customizable toolbar.

Export to Adobe® PDF, Microsoft Excel, Rich Text, HTML, Text and TIFF Images.

Royalty Free End User Report Designer. Share the power and flexibility of ActiveReports designer with your end users.

View your reports on the internet with the HTML viewer control, ActiveX viewer control, Microsoft .NET viewer control or Acrobat Reader.

Got data? Show it!

DATA DYNAMICS

Control Yourself.

614.895.3142

fax 899.2943

www.datadynamics.com

All trademarks and registered trademarks for products and companies mentioned herein are the property of their respective owners.
© copyright 2003, Data Dynamics

Chart FX for .NET goes to 6.2 - Whidbey next

New features 'highlight' latest release with more on the horizon

With the new features included in the latest release of Chart FX for .NET, version 6.2, it's no wonder Software FX has been able to lead the data analysis and charting market for over 10 years.

In version 6.2, Chart FX for .NET shows off more innovative ways to display comprehensive data in a graphical form. Starting with the new 'highlighting' feature, developers can include the ability for end users to highlight individual series and data editor columns when they are moused over. This allows users to easily examine individual points on a chart. Similarly, the new multiple pane view within the same chart allows the comparison of multiple unrelated entities that may share an X axis.

Also added was improved axis labeling functionality with the introduction of Data Driven Labeling. Automatic labeling has also been introduced, improving the display of Date/Time formatted axes. Developers can also apply specific labels, fonts, colors, grids and backgrounds to particular sections of any axis. Marker attributes can now be changed automatically, based on a given condition. Now

you can configure URL linking from each of the Legend and DataEditor entries, plus new and improved options for attaching, anchoring and clipping annotation objects. Chart FX for .NET 6.2 adds the ability to export your charts in Flash native format. The new Aqua, Butterfly, Gel, Museum and Pulsar borders and Sky, Mesa, Adventure & Vivid color palettes augment the design and color scheme of your charts.

This version sets the stage for the upcoming release that will be compatible for 'Whidbey'. Software FX had originally planned to save many of these features for that release, but decided to offer them to

the developers now instead of waiting on Visual Studio 'Whidbey'.

"Visual Studio 'Whidbey' introduces new technologies that Chart FX for .NET has primary and strategic interest and influence on, such as data connectivity, site management and enterprise deployment. We intend to take full advantage of each of these powerful new features for the benefit of our customers," said Rene Garcia, President and CEO of Software FX. "Even at such an early stage, it is impressive to see the quality, reliability and speed at which developers can implement a robust enterprise data visualization solution with Chart FX for .NET and Visual Studio 'Whidbey,'" concluded Mr. Garcia.

Most notably, Software FX is announcing a series of powerful new server features that will benefit ASP.NET Web Forms developers creating Internet and intranet applications. "Visual Studio 'Whidbey' introduces a whole new set of features that will benefit developers using Chart FX on IIS, more especially on the performance, scalability and security fronts. Similarly, Chart FX supports and natively connects to multiple data sources like data

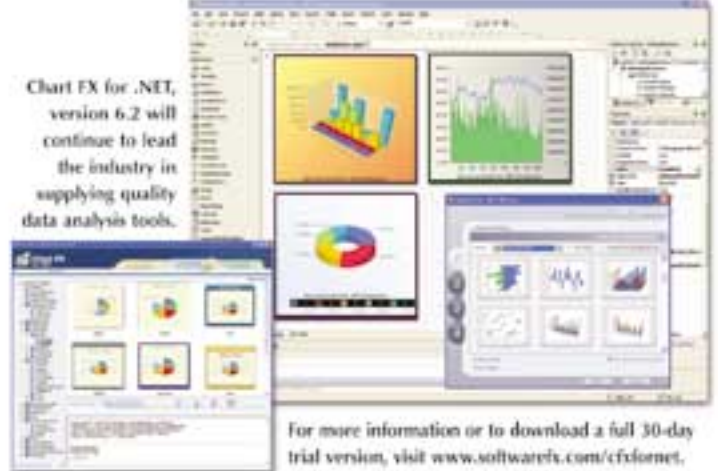


Chart FX for .NET, version 6.2 will continue to lead the industry in supplying quality data analysis tools.

For more information or to download a full 30-day trial version, visit www.softwarefx.com/cfxnet.

NEW FEATURES IN 6.2

The latest release of Chart FX for .NET, version 6.2, includes some very useful new features, including:

- **Highlighting** - Callout individual points, series and data editor columns as they are moused over.
- **Smart Date Axis Labeling** - Data driven and automatic labeling and date/time formatted axes.
- **Multiple Panes** - Render multiple panes within the same chart to compare unrelated entities.
- **Visual Attributes** - New borders and palettes, conditional marker and axis section attributes.
- **Extended URL Linking** - Configure URL linking from each of the Legend and DataEditor entries.

containers and grid views within Visual Studio 'Whidbey'. That's an advantage that will reduce the learning curve on our products and will ultimately reduce development costs and application maintenance" said Ivan Guggi, Chart FX Product Manager.

Quite often, developers are asked to have data front-end data analysis and reporting solutions integrated to virtually every business aspect. Chart FX for .NET meets and satisfies these needs quickly and cost effectively by providing not only a powerful business charting engine but also featuring powerful extensions that address diverse vertical and enterprise

charting needs. The Chart FX Extensions add specific capabilities or functionality such as Financial, OLAP, Wireless, Mapping, Real-Time and Statistical. With this robust Chart FX product line, Software FX really does fulfill their promise of any chart, anywhere!



10 YEARS
Software FX
Any Chart, Anywhere!

Full brew of Chart FX for Java now available

A robust blend of data visualization and reporting analysis comes to Java platform

Chart FX for Java is a 100% Java component that uses JSP technology to produce charts in a variety of formats: PNG, JPEG, SVG and FLASH. Developed using JDK 1.4, it supports J2EE 1.3 and J2SE 1.4. Chart FX for Java is available as a Server-side Bean and an Enterprise Java Bean (EJB) that runs on most popular Java Application Servers, including IBM WebSphere, BEA WebLogic, Apache Tomcat, Sun ONE, Oracle Application Server, Micromedia JRun and more.

Additionally, Chart FX for Java will produce Active Charts, in the form of, for example a .NET component, which is a combination no other vendor can offer. This allows developers to exploit the power and reliability of Java-based servers while providing a gratifying and dynamic experience to the greatly dominated Windows desktop environment.

Chart FX for Java preserves the familiarity, ease-of-use, scalability, drill-down capabilities, listnaming and auto-browser detection, as well as all the other features developers have come to

appreciate from Software FX.

Included are over 20 different chart types, customizable legends, ready-to-use color palettes, gridlines, multiple and customizable axes, annotation objects, per-marker attributes, background images, image borders and many other visual features. Chart FX allows you to create some of the most visually appealing charts in just minutes with features like gradients, alpha blending, anti-aliasing and transparency.

The Chart FX for Java Designer is a stand-alone chart template generator. Using this tool, you can create XML files containing all the visual attributes you desire for your chart. Once you have configured these settings in a familiar design-time environment, you can export the settings as XML and later import them into your charts using the import method.

Charts are easily populated with data through the API, JDBC, XML, Text Files and other popular data sources. And included is the Chart FX Resource Center, which contains the Programmer's Guide,

the Javadoc API and hundreds of samples that can be copied for use.

"10 years of creating quality developer charting solutions gives us an edge over others in the industry," said Robert Williams, VP, Marketing of Software FX. "So, although we're the new kid on this block, we've been in the neighborhood for a long time. The maturity of Chart FX and our support will prove it," added Mr. Williams.

For more in depth information or to download a full 30-day trial version, visit www.softwarefx.com/java.



Develop for any platform only \$299

The **Chart FX Developer Studio** is a collection of development-only charting solutions for the COM, .NET and Java platforms, as well as for IDEs such as Visual Studio.NET, Delphi, C#Builder, JBuilder, Sun ONE and WebSphere Studio. Also included in the Developer Studio are the Chart FX Extensions, including OLAP, Maps, Financial, Statistical, Real-Time and Wireless, which add capabilities or

provide a specific functionality. This allows a developer to only include the functionality that is needed and maintain a high level of stability and performance. This collection of non-expiring, full development versions of the entire Chart FX product line into one package makes for a convenient way to develop for different environments and different needs. At only \$299, The Chart FX Developer

Studio helps developers not compromise their budget up-front, allowing them to save their larger purchasing power until their solution is ready for deployment.

NEW!
Chart FX
DEVELOPER STUDIO

EDITORIAL

Making Headway

The Java industry is learning useful lessons in developer relations from Microsoft. That is good.

One lesson that Microsoft learned early on was that it pays to court developers. The success of the company's operating systems—DOS and Windows—can be easily linked to the company's devotion to providing strong tools and strong developer support programs. Strong compilers, documentation from Microsoft Press, integrated suites, a well-designed Web site and partner programs for ISVs all have contributed to the inexorable rise of Windows.

Few platform vendors paid such slavish devotion to developers as Microsoft, as even its competitors would admit.

Take the Macintosh. For years, the Mac was plagued by substandard tools, a difficult programming model and an uncooperative Apple, which treated most ISVs and enterprise developers poorly. The result? A dearth of applications, weak corporate adoption and low market share. Today Apple has turned that around with good programs, tools and education, and the Mac has never been stronger.

Take OS/2. IBM priced its developer tools high, waffled on ISV support and partner programs, and never could keep its message straight. While those weren't the only causes of OS/2's demise, the lack of an enthusiastic developer community helped speed the decline.

Take Java. Until about two years ago, the Java tools market was fragmented and didn't live up to the high standard set by Microsoft with Visual Studio. Yes, there were many quality third-party offerings from the open-source community and from commercial vendors (such as IBM's VisualAge for Java and Sun's Forte for Java). Still, for a long time it appeared that Sun and its Java Community Process focused primarily on expanding platform APIs. Tools and developer relations were perceived as a far lower priority—and one that was horribly out of sync with the platform.

The Java industry is learning its lesson.

IBM's Eclipse project is moving forward strongly, providing a rallying point for smaller tools vendors. Whether IBM's initiatives will have the success of Microsoft's Visual Studio Industry Partner program remains to be seen, but it appears that despite Sun's best efforts to the contrary, Eclipse is on course to become the de facto standard IDE for Java.

The fact that Eclipse will continue to compete against Borland's JBuilder and Sun's NetBeans project will benefit developers. The competitive environment will spur all three products forward, enhancing the state of the art.

IBM's move to make Eclipse an independent organization offers an opportunity to expand its presence and influence. If the organization successfully transitions to a vendor-neutral body, it could encourage additional involvement by Armonk's competitors, as well as wider adoption by developers who don't want to be locked into an IBM-centric tool chain.

All that's missing is a tight coupling among Eclipse, the Java Community Process, JavaOne and the java.net site. Microsoft's lockstep tie-in between Windows, VS.NET, PDC and msdn.microsoft.com has proven to be a winning combination. The Java community deserves and requires the equivalent. ■

GUEST VIEW

WAITING FOR MOBILE JAVA.SQL

I read an article recently (not in SD Times) about the BlackBerry 7200 series handheld that hailed it as "the ultimate Java device." Good Java-enabled devices are what we, as mobile Java database developers, are anxious to hear about. It turned out to be a letdown when we realized the device has only 2MB of SRAM for normal application execution and is based on CLDC 1.0 and MIDP 1.0 specifications.

That's hardly what I would call the ultimate Java device.

Further, the BlackBerry 7200 has no expansion slot for memory beyond the built-in 16MB. If an application exceeds the available SRAM, the application swaps into flash memory and performance typically declines noticeably. The manufacturer, Research in Motion (RIM), suggests you design applications carefully to avoid exceeding the available memory. For example, the company suggests you do not allocate large arrays, and that you use the `size()` method to

create arrays of an exact size when possible.

RIM does make Java development on the device more accessible with proprietary APIs for encryption, UI creation, access to system events, and utility classes for string functions, arrays and collections—but this defeats the portability for which Java was designed. It is not surprising that RIM would design a device that supports applications that support its business model—a semi-thin client that needs to communicate with a server over the RIM supplied network.

There are two limits to serious Java application development on mobile devices: If it isn't the device's hardware that limits Java development, then it's the JVM itself. Make note—you have to get past the "hype" to understand this.

There are a lot of new devices available with plenty of power. For example, the

newest handhelds from Palm, HP and Dell come with 64MB of memory, 400MHz Xscale processors and expansion slots, but no installed JVM. The new and very powerful Sharp Zaurus SL-760 comes with Jeode, a JVM built to PersonalJava specs, but unfortunately it's only available in Japan. Let's not leave out more expensive devices with the Symbian OS, such as the Sony Ericsson P900, that support PersonalJava and MIDP 2.0 with 16MB installed and an expansion slot.

So where are the JVMs for these powerful devices? Other than Sharp and Symbian, it's clear that most device manufacturers believe that the MIDP specs are sufficient for Java application support. The MIDP APIs provide only enough for text messaging applications, address books and games. Certainly, games seem to be the rage, but no one even knows what the size



DAVID MORSE

LETTERS TO THE EDITOR

UML NOT A METHODOLOGY

Regarding Alan Fisher's guest column ["Outsourcing, No; Code Reuse, Yes," Jan. 1, page 26, or at www.sdtimes.com/opinions/guestview_093.htm], it should be noted that UML itself is not a methodology. It is strictly a diagramming notation for expressing the structural and behavioral aspects of software. I am living proof that it need not be part of a heavyweight methodology, as I use it during discussions at the whiteboard, and even for taking notes during requirements-gathering sessions. It is also quite useful for reverse-engineering complex portions of code inherited from other developers. Most of my UML drawings are done on paper and last for one iteration of development.

If you wish to criticize methodologies such as the Waterfall model, you'll find me in agreement. But let's not throw out a useful, standard graphical notation because of a false connection with heavyweight methodologies.

Grant Schultz

SAFE AND SECURE?

Thanks for the article ["Application Security Goes National,"

Jan. 1, page 1, or at www.sdtimes.com/news/093/story1.htm]. As a software developer, I cannot help but feel chilled by such things.

I am involved in a project to predict surgical outcomes. We know a priori that we will never get 100 percent success in our predictions, and we can use statistics to try to determine the likelihood of failure. That said, the models we develop are far more accurate than guessing (as is currently done by surgeons). When the model does fail, it has less to do with the competency of the programmers and orthopedists involved than unknowns that have not been able to be quantified.

Given that when such a model is used clinically, we will inform patients of the chances of success or failure and that it is not a programming issue per se—should the people who wrote the programs and collected the data, etc., be held liable for a missed prediction?

Were licensing required of me and my colleagues (who have Ph.D.s, M.D.s or other

terminal degrees in biomechanics and the like, but not in computer science), we would probably not be doing this very worthwhile project.

I'm sure that others can come up with similar examples where such a requirement would prevent them from doing their work. I'm all for responsibility. However, I'm also certain that in America today, there is a sense of entitlement to complete and utter safety under every conceivable circumstance—and this simply is not possible in real life.

There is a whole other discussion surrounding the way such a regulatory scheme might affect open-source software and its use in the marketplace. Considering the peer review that surrounds open-source products like OpenOffice, MySQL, Apache and Mozilla, I personally would be much more comfortable having my life in the hands of these developers than in the hands of some "certified" programmers.

Timothy Niiler

As a computing professional, I would love to see a degree in Secure Computing. Perhaps

of the market for mobile games is.

There are a few good JVMs for Pocket PC devices (notably Jeode from Esmertec and CrEme from NSIcom) that support more than MIDP APIs, but they must be installed on the new devices after purchase. HP devices used to have Jeode installed on older iPaq models, but today they don't.

There are practically no JVMs for Palm OS that support the set of APIs needed for a decent data-centric application beyond games and messaging. Practically all the JVMs that run on Palm devices (with the exception of SuperWaba) have only MIDP 1.0 or 2.0 APIs. These don't even support java.io.File, much less the java.sql package. MIDP 1.0 also doesn't have floating point operations. Some applications overcome these limitations by replacing java.io functionality with their own package. But the problem with that is that you must replace the standard Java API in your code with theirs—and portability is gone.

Recently Palm announced its partnership with IBM to supply a MIDP 1.0 JVM for

installation on Palm devices. Although IBM does have a JVM that supports PersonalJava APIs that run on Pocket PC, the JVM included on Palm OS devices supports only MIDP 1.0.

Enterprise Java developers are crying out for the ability to be let loose on these devices—but unless they develop games or simple messaging apps, there isn't much to choose from. And what about applications that need to access a local database for such things as searching, sophisticated data manipulation, number crunching and even transactions?

These issues and others beg explanation, and I'd like to entertain two here:

First: Where is JSR-169, the all-important optional JDBC (java.sql) package for J2ME on small devices?

The Java Community Process' handling of JSR-169, from expert group formation to final draft, lasted about nine months, and the final draft has been approved for more than a year without a final approval for release. What's the holdup?

The java.sql package is well known. The hesitation of Sun to

release this key J2ME feature is one of the biggest mysteries to us. Without standard SQL/JDBC functionality, development of sophisticated J2ME database processing applications for the mobile enterprise is severely limited.

However, upon observing the members of the JSR-169 expert committee, perhaps some conjecture might present a rationale for this baffling waste of time. All of the members of JSR-169's expert group that have mobile database products for J2ME currently provide a proprietary version of java.sql. Can you imagine a conflict of interest?

Second: Is IBM delaying Java on the handhelds?

A real letdown for Java developers regarding the partnership between IBM and Palm was that it brought only CLDC MIDP 1.0 to Palm OS and the Tungsten. What a waste of a powerful handheld! It makes me wonder what kind of game IBM is playing with enterprise mobile Java app developers.

Maybe IBM's strategy is to limit the level of Java functionality in these powerful PDAs,

because it is afraid it could lose ThinkPad revenue to it. But I don't want to pick on IBM. Try to find any decent information on Java support on the mobile side of HP's or Dell's Web site.

We have some great hardware devices available, but the major limit to Java enterprise application development for mobile devices comes down to the JVMs, and their lack of standard API support, most importantly JSR-169. Once this standard API is available, Java developers can start creating serious database processing applications that take advantage of the powerful capabilities many handhelds provide.

When Java 2 first came out, a good desktop PC had 64MB of memory and a 400MHz processor. It is only a matter of time before handhelds become even more powerful. But in the meantime, non-Java proponents will grab more enterprise mobile application market share and Java will be playing games while it plays catch-up. ■

David Morse is co-founder and vice president of FirstSQL Inc., which sells Java database software.

Ron Moritz could be the first person sent for it since his statement that "Java was the first language that emerged with security constants inherent" is laughable.

CA may love Java, but the academic world has been building provably secure computing systems since the 1950s. For 50 years the outside world has been ignoring everything they have to say because the mathematics is hard and it doesn't have a dollar sign on the bottom.

There is another important issue that has to be addressed: Bridges are maintained by competent engineers, and they stay up because they are both designed well and maintained well, while most computing systems are not maintained at all (and as we all know, don't stay up).

Alan Cox

NO SCRIPTING LANGUAGE

I read your article in SD Times ["Forging a Process for Software Builds," Jan. 1, page 8, or at www.sdtimes.com/news/093/story9.htm] and as a software configuration management consultant who recently evaluated Openmake for build automation in a J2EE environment, I need to refute

the statement by Joe Senner.

Openmake does not use a proprietary scripting language to facilitate build automation. Users of Openmake specify the location of source files and dependencies among these source files using the Openmake GUI. Openmake uses this information, along with build rules maintained in the Openmake knowledge base, to prepare a build control file that is used to execute the build. Openmake is shipped with a knowledge base of build types for all popular compilers, development environments and platforms. The strength of Openmake is that it does not require scripting by its users, like that required by users of Make and Ant.

Given the growing interest of software development organizations to automate their build processes, I think readers of SD Times would enjoy an article that surveys the different commercial and open-source tools available.

Such an article should include a discussion of Openmake, since it is a commercial build automation tool that is in wide use today, and is resold by three major software configura-

tion management tool vendors, CA, MKS and Merant.

Michael Sayko

I read your article with interest. I am always happy to see the subject of build management in the press. I'm also always happy to read mention of Openmake.

I would, however, like to point out a discrepancy made by Mr. Senner. Openmake certainly requires no learning of any proprietary scripting language. The primary goal of Openmake is to remove the requirement for developers to perform *any* scripting at all—no makefiles, no ANT/XML and no special Java classes to perform builds within the IDE or externally by a build master.

Openmake provides organizations with a single rules-driven build process regardless of platform compiler or OS, including the mainframe. This is one of the primary things that sets Openmake apart from the other tools. The manual scripting required by most other build tools is a huge hole in any organization's goal of eliminating risk in development. Organizations spend hundreds of thousands of dollars to

purchase the right development tools, IDEs, SCM tools, etc., to eliminate development risk and conform to CMM and ISO standards, yet still rely on handwritten scripts to control the creation of production applications.

Openmake enables an organization to get out of the business of paying their most senior developers to write and maintain scripts and lets them get back to writing code.

Patrick Egan

Vice President
Marketing-Business
Development
Catalyst Systems Corp.

Editor's note: Catalyst Systems Corp. owns Openmake.

WHAT DO YOU THINK?

SD Times welcomes feedback. Letters should include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited for space and style.

Send your thoughts to feedback@bzmedia.com, or fax to +1-516-922-1822. Please mark all correspondence as Letters to the Editor.

SD Times
Software Development Times
February 1, 2004 - Issue No. 095

Publisher

Ted Bahr

+1-516-922-2101 x101 • ted@bzmedia.com

Editor-in-Chief

Alan Zeichick

+1-650-359-4763 • alan@bzmedia.com

Editor

David Rubinstein

+1-516-922-2101 x105 • drubinstein@bzmedia.com

Senior News Editors

Edward J. Correia

+1-516-922-2101 x100 • ecorreia@bzmedia.com

Jennifer deJong

jdejong@bzmedia.com

Associate News Editor

Yvonne L. Lee

+1-408-255-1153 • yilee@bzmedia.com

Copy Chief

Patricia Sarica

+1-516-922-2101 x106 • psarica@bzmedia.com

Art Director

Mara Leonardi

+1-516-922-2101 x109 • mleonardi@bzmedia.com

Columnists

Andrew Binstock

abinstock@pacificdataworks.com

Larry O'Brien

larryo@thinkingin.net

Steven J. Vaughan-Nichols

sjvn@cna1.com

Contributing Writers

Alyson Behr

abehr@behrcomm.com

Lisa Morgan

lisamorgan@mindspring.com

Oliver Rist

orist@fb2corp.com

Esther Schindler

esther@bitranch.com

Advertising Sales Representatives

Southwest U.S.

Julie Fountain

+1-831-476-1716 • jfountain@bzmedia.com

Northeast/North Central U.S./Canada

David Karp

+1-516-922-5253 • dkarp@bzmedia.com

Northwest U.S./Canada

Paula F. Miller

+1-925-831-3803 • pmiller@bzmedia.com

Southeast U.S./Europe

Jonathan Sawyer

+1-603-924-4489 • jsawyer@bzmedia.com

Director of Circulation & Manufacturing

Rebecca Pappas

+1-516-922-1818 • rpappas@bzmedia.com

Circulation Assistant

Advertising Traffic

Phyllis Oakes

+1-516-922-2287 • poakes@bzmedia.com

Office Manager/Marketing

Cathy Zimmermann

+1-516-922-2101 x108 • czimmermann@bzmedia.com

Customer Service/Subscriptions

+1-866-254-0110 • service@bzmedia.com

Accounting

Lauren Phillip

accounting@bzmedia.com

Article Reprints

Lisa Abelson • Lisa Abelson & Co.

+1-516-379-7097 • fax +1-516-379-3603

lisa@abelsonreprints.com

BZ Media

President

Ted Bahr

Executive Vice President

Alan Zeichick

BZ Media LLC

2 East Main Street

Oyster Bay, NY 11771

+1-516-922-2101 • fax +1-516-922-1822

www.bzmedia.com • info@bzmedia.com



"Everyone wants faster, better, cheaper. We thought they might appreciate smarter, too." Entering the integration market we had three advantages: we knew the costs and hassles of traditional integration solutions were limiting their adoption, we saw that a standards-based service oriented architecture would solve these problems, and we had the world's most scalable enterprise messaging server, SonicMQ®, as a core technology. We combined SonicMQ's performance and security with Web services, XML transformation, intelligent routing and a new distributed deployment and management infrastructure to develop the world's first Enterprise Services Bus, Sonic ESB™. With it businesses can easily integrate existing and future applications to create unprecedented business agility, and they can start today knowing they can scale to meet tomorrow's needs. We call it incremental integration. It's smarter. It's also faster, better and cheaper.



Gordon Van Huizen, CTO

DON'T DENY OFFSHORING

An unpopular topic today among U.S.-based programmers is the impact of outsourcing development offshore or what is colloquially termed offshoring. When I speak to developers, I repeatedly hear passionate condemnations or flip dismissals of offshoring—usually articulated in one of the following ways:

1) Only grunt programming is going offshore. The really hard stuff—the magic—is staying right here.

2) Before long, companies will recognize that offshore programming is either not of very high quality or not very economical.

3) Security concerns will force companies to rethink offshore commitments.

It's a point of faith that soon the attraction of offshoring will fade and companies will recognize the benefits of returning those jobs to U.S. shores.

Interestingly, when small travel agencies were wiped out due to disintermediation by the Web, travel agents offered precisely the same denials: quality of service would suffer; the savings were illusory; once people had gone without agents for a while, they would recognize their error and come back to how things used to be. Of course, none of these predictions came to pass. And, likewise, none of the fond illusions developers hope for regarding offshoring will come

to pass either. By all estimates, offshoring will accelerate—IDC expects it to double next year and triple by 2007.

Let's examine the counterarguments, by the numbers.

1) Only the easy, boring coding is going offshore. This was true in the pilot offshoring projects before large firms became comfortable with the model. Now, increasingly, core software is being coded overseas.

Even if this weren't so, however, and only the grind-it-out code were moving overseas, it would represent a serious squeeze on American programmers, who, let's face it, spend most of their time doing just exactly this kind of journeyman coding.

The second part of this argument—that the magical coding will stay in the United States—smacks of xenophobia: It avers that American programmers have an innate ingenuity or savvy that cannot be duplicated easily. Images of Bill Joy, James Gosling, Dennis Ritchie and Richard Stallman come to mind.

But, in fact, most of today's celebrated technologies are the product of foreign programmers: Linux (Finland's Linus Torvalds, based on Minix written by Holland's Andrew Tanenbaum), C# (Denmark's Anders Hejlsberg) and, of

course, the Web itself (England's Tim Berners-Lee).

In addition, C++, Python and Turbo Pascal/Delphi are the product of foreign-educated programmers. So, the assertion that true programming innovation is the province of U.S. developers seems to lack supporting evidence.

2) The claim that savings are far less than anticipated is another canard. Let's be clear: Cost savings are the principal (and in most cases, the only) reason for offshoring. If there are no savings, there will be no offshoring.

It's probably true that as programmers in, say, India become increasingly skilled, they will seek higher wages. But if this pricing pressure reduces savings sufficiently, it will force the work to migrate to even less-expensive countries—certainly not back to the United States. And as other countries see the success currently enjoyed by India, they are entering the market and competing—a move that will accelerate offshoring.

3) There's no reason to believe that security concerns will force companies to re-examine their commitments to off-shore development. And, if security does prove to be a problem, companies will change their offshoring policies to solve the problem. Companies change policies and adapt—which is how offshoring began. They don't give up savings because

of security risks—they attend to security.

What about the quality of the delivered product? Naysayers point to Dell's decision late last year to pull tech support from India back to the United States as evidence that foreign workers simply cannot provide the quality that American businesses require.

This may be true for support, which is an activity that contains inherently important cultural factors beyond basic English language skills and knowledge of a specific product line. But we should note that Dell repatriated only the top-tier tech support to the United States; the rest of the support is still overseas.

Difficult as it might be for U.S. developers to accept, offshoring is bringing home two important realities: globalization and the fundamental reality that much of programming work requires skills that are not difficult to learn quickly or provide inexpensively.

The fact that developers have been able to command high salaries and preferential treatment in the face of this latter reality underscores why American companies are so willing to abandon them for their less expensive counterparts abroad. Holdouts and nonbelievers will wait until reality is forced upon them. Meanwhile, salvation comes to those who recognize the new reality. ■

Andrew Binstock is the principal analyst at Pacific Data Works LLC.

INTEGRATION WATCH



ANDREW BINSTOCK

dtSearch Instantly Search Gigabytes of Text Across a PC, Network, Intranet or Internet

Publish Large Document Collections to the Web or to CD/DVD

- over two dozen indexed, unindexed, fielded & full-text search options
- highlights hits in HTML, XML, & PDF while displaying embedded links, formatting & images
- converts other file types (word processor, database, spreadsheet, email, ZIP, Unicode, etc.) to HTML for display with highlighted hits

"The most powerful document search tool on the market" —Wired Magazine

"Intuitive and austere ... a superb search tool" —PC World

"Blindingly fast" —Computer Forensics: Incident Response Essentials

"A powerful arsenal of search tools" —The New York Times

dtSearch "covers all data sources ... powerful Web-based engines" —eWeek

"Searches at blazing speeds" —Computer Reseller News Test Center

In the past two years, over half of the Fortune 15 purchased dtSearch developer or network licenses.

See www.dtsearch.com for:

- hundreds of developer case studies & reviews
- fully-functional evaluations

1-800-IT-FINDS
sales@dtsearch.com

The Smart Choice for Text Retrieval® since 1991

dtSearch Desktop with Spider \$125

dtSearch Web with Spider \$200 per server

dtSearch Text Retrieval Engine for Win & .NET for Linux call for pricing

dtSearch Publish for CD/DVDs from \$2,500

dtSearch Network with Spider from \$800

Results MATTER.

- Embed high performance optimization, data mining, simulation, and statistical methods into your applications
- Support for your platforms
 - Windows, UNIX, Linux
 - Java, C/C++, .NET
- Get expert support
- Stay—on schedule and on budget

For ISV and enterprise applications, come to the experts at NAG

- 2500+ components and 30+ years of experience
- Expert development support tailored to your needs
- License and deployment solutions to fit your needs
- Many satisfied ISV partners including IBM and PeopleSoft

NAG Results Matter. Trust NAG
Numerical Algorithms Group
www.nag.com/info/sd
630.971.2337
info-sd@nag.com

VS Live!

Visual Studio Developer Conference

San Francisco

March 23-27, 2004



Bill Gates On Whidbey, Microsoft Speech Server and Mobile Development

Key Topics You'll Hear About in San Francisco

- Data Access with ADO .NET
- VB Tips, Tricks and Workarounds
- ASP.NET & Web Services
- C# Black Belt Sessions
- Security with Visual Studio
- Oracle, SQL Server & DB2

Microsoft

msdn

FTP FAWCETTE
TECHNICAL
PUBLICATIONS

Build Better and Faster with Visual Studio .NET 2003 **TODAY!**

Plus, sign up for the Gold Passport,
and attend Microsoft Mobile DevCon.

Microsoft
2004 **MDC**
Mobile DevCon

Be one of the first 500 to register, and we'll send
you a **Smartphone Developer's Kit**
FREE!



Kai-Fu Lee
Microsoft Corporate Vice President
*On Speech-enabling Devices and Speech
Application SDK*



Bill Baker
General Manager in the SQL Server Business Unit
On Business Intelligence



Don Box
XML Messaging Architect
On Mobile Development

Register Today 800-848-5523
(or +1 650-833-7130)
www.vslive.com/SF

IGNORING THE SCRIPTS

Why have dynamic languages failed to achieve any kind of traction under .NET? At .NET's launch two years ago, the separation of platform and language was heralded by some, including myself, as .NET's greatest strategic advantage. The ability to use languages as diverse and interesting as Python and Haskell with the sweeping functionality of the Base Class Library (BCL) seemed to open the floodgates for a revitalized interest in alternative languages. But today, the use of dynamic languages to power an ASP.NET Web site is practically unheard of.

Programmer Danny Boyd wrote an open letter accusing Redmond of abandoning those "whose responsibilities cover a variety of IT niches (desktop support, server admin, IT education, etc.).... [T]hey still need to produce simple, procedural, functional web-based database applications. I'm talking here about HTML forms that post or retrieve data for editing." Boyd takes pains to say that the issue is that "[w]orking with any language in the CLR still carries the full weight of .NET." (You can read the full text of Boyd's letter at www.dannyboyd.com/archives/2003_12_28_index.asp#107275109953625219.)

Boyd's phrasing is interesting—why the "full weight" of .NET, when Microsoft would say the "full power"? Boyd laments the intimidating scope of the Base Class Library, but it's primarily .NET's "event-driven, object-oriented" programming

model that he blames. Don Box (a Microsoftian, but speaking on his own behalf) concurred with Boyd's sentiment, wishing for the day "the industry wakes up from its C++/Java-induced haze and starts thinking about making computers programmable again." Box lays the blame on .NET's type system, which demands that even the most trivial script be swaddled in the formality of a type definition.

Within the Common Type System of .NET, there is no way to call a nonstatic method without knowing the type of the object; it is a strongly typed programming system. You can create a .NET programming language that is loosely typed by going outside of the constraints of the CTS, but doing so limits your interoperability. Much easier, and still fully interoperable, the reflection facilities may be used to determine the type of an object and dispatch methods on it.

This is generally referred to as *dynamic* typing—the type is determined at runtime, but before methods are dispatched—and is contrasted to *static* typing, where the type of the object is determined at compile time. To muddy the waters, the strong-loose, static-dynamic typing questions are relevant only to compiler writers, while what most programmers are concerned about are the relative benefits and burdens of "explicit versus implicit" typing (which

critics deride as pointless "finger typing," and proponents claim is important for readability).

An explicitly typed language, such as C#, naturally supports a statically, strongly typed programming model. However, it is possible to write an implicitly typed language that is also statically, strongly typed: Languages in the ML family show that compile-time type inference can be very successful. Static typing has undisputed advantages: Editors can pop up a list of available methods and properties, compilers can diagnose incorrect assignments, and method dispatches can be predetermined. This is clearly the sweet spot for the future, but type inference appears to be hard to implement for the most popular "scripting" languages.

This has left implicitly typed language designers the Hobson's choice of working outside the CTS or relying on reflection to implement method dispatch. Reflection-based dispatch is easily implemented and works in a portable manner, but naturally without the performance of a statically typed method call (CLR 1.2 contains additional features designed to aid the creation of dynamic languages).

Ironically, the critical performance "flaw" in more than one dynamic language for .NET appears to be a widespread reliance on reflection during the compiler-development process, improving the productivity of the compiler writer but producing tools (compilers and core runtimes) whose performance

compares poorly with tools produced with traditional methods.

However, Jim Hugunin, co-creator of the AspectJ language and creator of Jython, recently declared that "Python can run fast on the CLR" and posted impressive numbers from internal testing on a Python implementation he calls IronPython.

The failure of dynamic languages to gain traction on .NET (and especially in the ASP.NET arena) is not just a matter of lackluster implementations.

The vast majority of documentation for .NET not only assumes the use of a Microsoft language such as C# or VB.NET, it also assumes the use of Visual Studio .NET, and building a "Hello, Web!" ASP.NET page is almost always tied to some VS.NET wizard.

Wizards invariably suffer from Spolsky's Law that "all nontrivial abstractions, to some degree, are leaky," and when the abstractions of ASP.NET and VS.NET wizards leak, the result is what Boyd diagnoses as "PHP, Perl and MySQL books appearing on the shelves of my co-workers."

Microsoft is too busy promoting its own languages to do a good job of promoting alternatives. If every challenge is an opportunity, then dynamic languages on .NET present a golden chance for an enterprising tools company. ■

Larry O'Brien is an independent technology consultant and analyst, and the founding editor of Software Development Magazine.

NETBEANS VS. ECLIPSE: ROUND 2004

Foolish me. I had hoped that Sun would finally make peace with the IBM-inspired Eclipse consortium late last year. I was wrong.

Officially, Sun won't play with Eclipse because Eclipse wouldn't merge Eclipse with Sun's NetBeans framework. Eclipse responded that it did not want to work toward providing a single Java plug-in for integrated development environments. The truth, as I see it, is that Sun doesn't want to play in a Java-related club that doesn't have it as president.

In some ways this is a good thing, because this turf war leads to competition that leads to the advancement of not only Eclipse and NetBeans but other important Java tools, such as JBuilder, IDEA and JDeveloper, as well. When all the tools are getting better, can there really be anything wrong?

Well, actually yes. Eclipse and NetBeans take fundamentally different roads to the interface. I really don't think Java developers need to waste their time squabbling over whether to use native GUI APIs (Eclipse) or Java's Abstract Window Toolkit (AWT) and Swing.

I consider squabbling in the marketplace between fundamentally different approaches on how to handle a common

problem downright foolish. For example, the competition between the K Desktop Environment (KDE) and GNOME for the Linux desktop may have helped push the advancement of both GUIs, but from where I sit, it's also held the Linux desktop back. The same thing is true of Eclipse versus NetBeans.

Oracle, an Eclipse member, seems to agree with me. The database giant is working on a Java Community Process (JCP) specification that would provide a single Java plug-in for integrated development environments.

But while Oracle tries to play peacemaker, Sun and IBM are still throwing mud at each other. Or, since I think IBM went out of its way to make peace, Sun is primarily responsible for continuing the NetBeans versus Eclipse dispute.

What's especially annoying about the continuation of Eclipse versus NetBeans is that they're getting closer together. Starting with NetBeans 3.6, due out early this year, NetBeans will have a new interface, using—get this—the operating system's Windows calls.

In short, NetBeans itself will be using an Eclipse-style approach so that its

interface looks like the native operating system GUI rather than an AWT/Swing interface used in earlier versions. Hmm...if it's good enough for the developers, isn't it good enough for users? Don't you think they might want fast interfaces that look and feel like their home GUI, too?

Sun apparently doesn't think so. Sigh!

In the meantime, Sun, Oracle and BEA seem to be closer to launching yet another attempt to unify their IDE frameworks: the Java Tools Community (JTC). This JCP-friendly initiative was supposed to get off the ground in September 2003, but, so the story goes, other companies wanted in, so its launch was delayed. Now, I'm told, the project will fly early this year.

Specifically, Compuware, SAP AG, SAS Institute, Sybase and Telelogic are in. Borland and IBM were invited to join, but it looks like IBM won't be joining. Borland, with its own tools platform and APIs based on JBuilder, may also stay out.

Can you say that Sun is trying to turn NetBeans versus Eclipse, which is largely seen as Sun versus IBM and friends, into Sun and friends versus IBM and friends? I can, and do.

And I'm sick and tired of it. Does this

corporate catfight actually help developers? No. Does it help end users? No. Does it waste our time? Yes, yes it does.

Making me especially sour is that this kind of thing could help. Competition usually leads to better products at lower prices. But I don't think that's the case here.

You see, the JCT really isn't about improving Java IDE interoperability or enabling developers to select the best-of-breed IDE components that are best for their projects. It's Sun's effort to slow down Eclipse's, and thus IBM's, influence on the Java market.

Yes, I know Sun sees Eclipse as an attempt to wrestle control of Java away from Sun, but come on, for all the good that the JCP does, it remains little more than Sun's lap dog.

Wouldn't it be nice if people were to put away these corporate squabbles to focus on producing a true top-of-the-line, open-standard set of interoperable development tools and plug-ins for Java? That way we get the tools we really want. That's sure better than bothering with whether Sun or IBM should be calling Java tool development shots. ■

Steven J. Vaughan-Nichols is editor of Practical Technology (www.practical-tech.com) and has worked as a programmer for NASA and the Dept. of Defense.

WINDOWS & .NET WATCH



LARRY O'BRIEN

JAVA WATCH



STEVEN J. VAUGHAN-NICHOLS

THOROUGHLY MODERN MINING

Object Management Group Inc. has undertaken an ambitious project, called Architecture-Driven Modernization, as a way to make current an organization's legacy systems—"any production-enabled system regardless of language or platform." As I discussed in the last column ("Two Sides to Every Transformation," Jan. 15, page 26, or at www.sdtimes.com/cols/industrywatch_094.htm), Phil Murphy of Giga Information Group claims the idea is too broad and, because the initial effort will not delve down to the code level, "fatally flawed."

Into the middle of this imbroglio has walked Blue Phoenix Solutions Inc., which recently joined OMG and is a part of the AMD effort, yet which also thinks Murphy has raised some good points in his counterargument. Blue Phoenix has pulled off some recent acquisitions to move itself squarely into the COBOL regeneration process.

"We place ourselves in the modernization space," said Ted Venema, Blue Phoenix's senior vice president of product management. "Our general feeling is that screen-scraping is a good first step, but clearly it's not enough. Step two is automated migration—pump something in and get something else out. This works well when you're not crossing architectures. COBOL to Java failed miserably because there were real tough architectural issues."

Among the problems are moving from a CICS world to a GUI, event-driven one; dealing with a procedural language such as COBOL in new architectures that have been written for object orientation; and moving to a process-driven approach from a screen-

driven approach, Venema said.

"Redevelopment is the way to go," he added. "You mine out of what you have as much as you can, the business-flavored code, and leave the technical code behind. Otherwise, you end up in a no-man's land between two systems. You want to mine the screen definitions, the data definitions, procedural and data flows, the things that are really relevant."

INDUSTRY WATCH



DAVID RUBINSTEIN

The OMG effort "is too big," Venema said, agreeing with Murphy. "The way we approach it is IT discovery. You put all the assets into a relational repository. We're working with [OMG] to define what the repository should hold." But Venema believes, as does the OMG modernization task force, that going down to the paragraph level is deep enough. "We just want to know how things hang together, such as which programs call which programs." From this information a model can be created, Venema explained, and tools for code maintenance or analysis can work off the model. "There just is no clear idea yet what the model should be."

Ed Gentry, vice president of product management at Blue Phoenix, discussed the efforts of company partner Cook Systems International Inc., which has combined the Blue Phoenix rapid application development and legacy modernization technologies with its own knowledge of systems and applications to offer a code maintenance solution at a greatly reduced rate.

"Maintenance of these COBOL applications is expensive because the app systems are fragile and not flexible," Gentry said. "What I need is to be able to rearchitect the application, using the existing app as a specification, and create

a new application in the new architecture with the same functionality." Gentry said Cook, using a RAD tool, was able to reassemble one particular COBOL application as HTML.

This type of effort, Venema said, is less ambitious than OMG's goal to modernize everything, but can be implemented more quickly and accomplish more in a specific system. "We're not interested in everything in your system," Venema said. "At least a third of that is throwaway stuff, like instructions for interacting with the operating system. We want to leverage the salient pieces with RAD tools to extend these applications."

In the Blue Phoenix vision, organizations will be able to set up specific repositories for their own purposes, such as a development repository. "You don't need every nuance of COBOL in that repository" to reassemble the business logic pieces into newer applications, Venema said. "There are only a handful [of COBOL assets] that are relevant to the regeneration process."

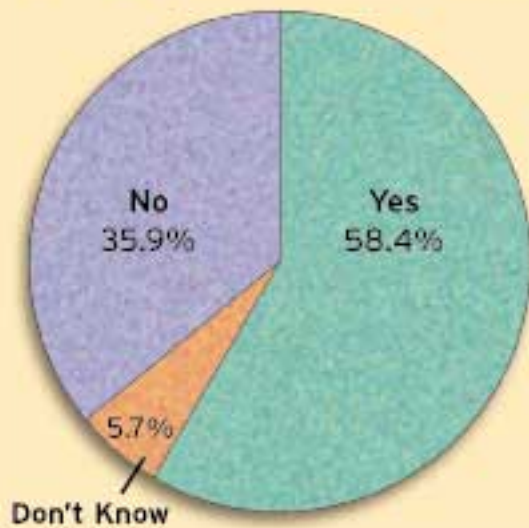
The decision by Blue Phoenix to get on board with the OMG effort, rather than going in its own direction, is a good one. Many organizations today, which rely on mainframe applications but also see the need to reuse applications and move to service-oriented architectures, are experiencing pain because there is no standard way of achieving those goals.

A number of vendors, from application integration companies to legacy transformation companies, have attacked the problem from different angles. The OMG effort is the first industrywide attempt to define IT systems and build a model of the interactions. And Blue Phoenix, it appears, is ready to help OMG define the scope of its efforts. As Venema said, "OMG has always needed a vendor with a practical example" to lead the way. ■

David Rubinstein is editor of SD Times.

Asia Pacific Development Survey: Do You Use UML for Your Application Design?

DATA WATCH



North American software developers who object most strenuously to companies outsourcing to India and China often claim that the Asia-based developers aren't as agile in establishing a mature development process.

In fact, the opposite is true, according to Evans Data Corp.'s Asia Pacific (APAC) Development study: A higher percentage of APAC developers use the Unified Modeling Language than developers in North America.

In Asia Pacific regions, nearly three out of five developers in these regions (58.4 percent) use UML for their application design (see chart), compared with 42 percent among North American developers. Further, 43 percent of those developers say they use tools to identify and formally manage workflow in applications—twice the usage rate as in North America.

The bigger the size of the development team, the more likely the developer is to use UML. In companies with one to five developers, 45 percent use UML, but more than two-thirds of developers in firms with 50 or more developers use UML for application design.

Source: Evans Data Corp., APAC Development Survey, Fall 2003. www.evansdata.com

BUSINESS BRIEFS

Oracle Corp. has named its chief financial officer, Jeff Henley, to the position of chairman of the board of directors, completing the separation of the responsibilities of chairman and chief executive officer. Larry Ellison remains as CEO, and Safra Catz and Charles Phillips have each been promoted to president, for global operations and field operations, respectively. Henley will continue in his role as CFO until a successor is in place. Ellison called Henley "an expert on corporate governance and accounting" . . . **Janeva Corp.**, an Internet marketing and software company founded in 1997, has filed suit against **Borland Corp.** for use of its name for a broad range of software products. Borland had filed an Intent to Use the Janeva name with the U.S. Patent and Trademark Office in 2003; the company Janeva never had registered its name. Janeva had written to Borland seeking to get the company to stop using the trademark, but Borland refused. Borland officials declined to comment on the case . . . **Novell Inc.** has completed its US\$210 million acquisition of **SUSE Linux AG**, and should now be able to complete a \$50 million investment by **IBM Corp.** in Novell that was announced Nov. 4. SUSE Linux becomes a branded product business unit within Novell with its sales and marketing handled by Novell's existing geographic business units and SUSE Linux's current sales and marketing staff . . . **Apple Computer Inc.** last month reported first-quarter revenues of US\$2.006 billion, an increase, it said, of 36 percent over the same period a year earlier. Revenues for the quarter marked a four-year high for the company, it reported. The company also reported a net profit of \$63 million, or 17 cents per share, compared with a net loss of \$8 million for the same quarter last year. ■

CALENDAR OF EVENTS

Web Services On Wall Street Feb. 3-4

New York

LIGHTHOUSE PARTNERS INC. & FLAGG MANAGEMENT INC.

www.webservicesonwallstreet.com

Emerging Technology Conference Feb. 9-12

San Diego

O'REILLY & ASSOCIATES INC.

conferences.oreillynet.com/etcon

Intel Developer Forum Feb. 17-19

San Francisco

INTEL CORP.

www.intel.com/idf

TI Developer Conference Feb. 18-20

Houston

TEXAS INSTRUMENTS INC.

www.ti.com/tidc04prbox

RSA Conference Feb. 23-27

San Francisco

RSA SECURITY INC.

www.rsaconference.com

Edge 2004 East Feb. 24-26

Boston

SYS-CON MEDIA INC.

www.sys-con.com/edge2004

For a more complete calendar of U.S. software development events, see www.bzmedia.com/calendar.

Information is subject to change. Send news about upcoming events to events@bzmedia.com.

The Fastest and Easiest Way to Deliver Feature-Rich .NET Framework Solutions to Your Customers

Developer Express technologies help you build your best, reduce the amount of code you write, increase your productivity, and create stunning applications for Windows® and the Web in the shortest possible time...

To learn more about our tools and how they can significantly impact your bottom-line visit us online at www.devexpress.com



● Productivity Tools

CodeRush is a powerful editor add-in for Visual Studio® .NET. Create more code with fewer keystrokes, see complex software with clarity, and design forms with ease. Say goodbye to drudgery and get ready to become the programming superhero that you always knew you could be.



● Reporting

A comprehensive reporting platform for Windows® and the Web, XtraReports is fully integrated into the Visual Studio® .NET IDE and sets the standard for ease-of-use and flexibility. With XtraReports, you never have to cringe at the thought of having to design a report again!



● Visual Components

To build stunning and flexible applications, you need feature complete components... Ones that work as expected, each and every time. Our complete range of visual components will help you emulate today's most popular UIs without hassles or aggravation. Like all of our tools, our components were written in Visual C#™ and fully optimized for the .NET Framework and all .NET languages.



● Application Development Framework

XPO represents a powerful bridge between the true object world and relational databases. It gives developers the freedom to build true business objects without having to deal with the tedious complexities of mapping them onto individual database tables.

Developer
EXPRESS

Microsoft, Visual Studio.NET, Windows, and Visual C# are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

(888) 60-DevEx
(702) 262-0609
www.devexpress.com



Featuring Microsoft® Visual Studio® .NET Technology

SQL Server install.



configure SQL
Server databases



add and
manage users



IIS installations



www.wise.com

©2003 Wise Solutions. All Rights Reserved.

Simplify Server Installations with Wise

In the past, professional developers creating server installations have faced many problematic choices that detract from designing and coding the application. Now with Wise for Windows Installer and Wise for Visual Studio .NET, building a server installation and configuring users is as easy as a traditional desktop installation.

Configure - Configuring SQL Server databases is a very common part of creating server installations. You don't have to be a SQL expert to configure the databases - Wise makes it fast and easy.

Users - Regardless of your experience with server installations, Wise makes it easy to add and manage users during the installation process, saving you from writing complicated code.

IIS installations - You can quickly, easily create and customize Microsoft Internet Information Services (IIS) installations. Optimizing your IIS installations is easier than ever with Wise.

Download your free evaluation at
<http://evaluations.wise.com>

Microsoft
CERTIFIED
Partner